

Annual Report

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OF THE MINISTER OF LANDS AND FORESTS

OF THE PROVINCE OF ONTARIO

for the fiscal year ending

MARCH 31, 1961

CONTAINING THE
DETAILED REPORTS OF
THE BRANCHS OF

ACCOUNTS
FISH AND WILDLIFE
FOREST PROTECTION
LANDS AND SURVEYS
LAW
OPERATIONS
PARKS
PERSONNEL
RESEARCH
TIMBER



ONTARIO

THIS DETAILED ANNUAL REPORT

of the

MINISTER OF LANDS AND FORESTS

of the

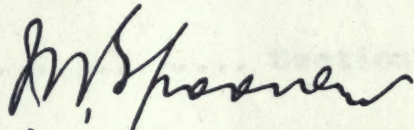
PROVINCE OF ONTARIO

To His Honour,

The Lieutenant Governor
of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned begs respectfully to present
to your Honour, the Annual Report of the Department
of Lands and Forests for the fiscal year beginning
April 1st., 1960, and ending March 31, 1961.



J.W. Spooner
Minister

Accounts Branch

Fish and Wildlife Branch

Forest Research Branch

Lands and Surveys Branch

Law Branch

Operations Branch

Parks Branch

Personnel Branch

Research Branch

Statistics Branch

Section No. 1

Section No. 2

Section No. 3

Section No. 4

Section No. 5

Section No. 6

Section No. 7

THE DETAILED ANNUAL REPORT

of the

MINISTER OF LANDS AND FORESTS

of the

PROVINCE OF ONTARIO

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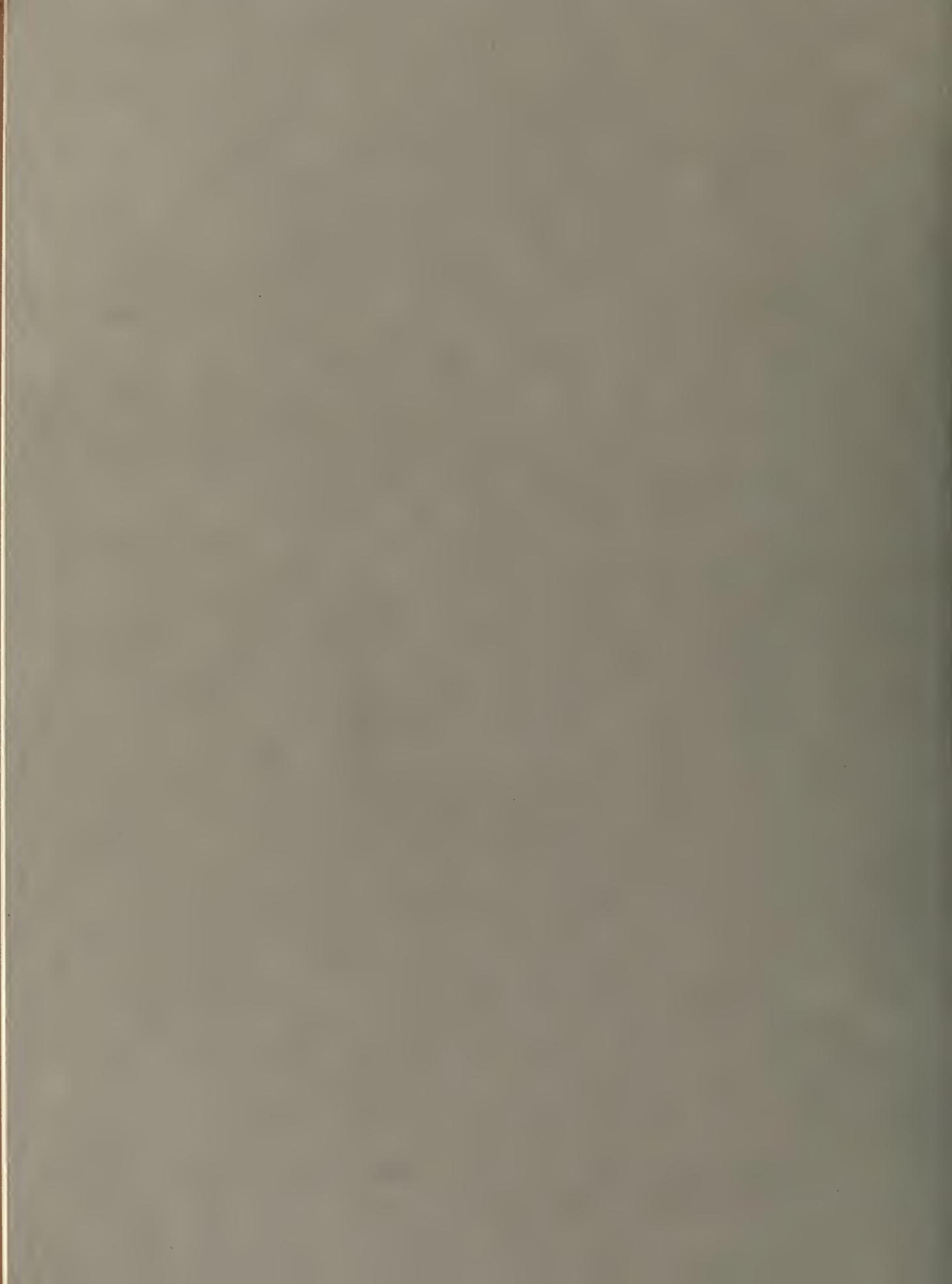
For the Year ending March 31st, 1961

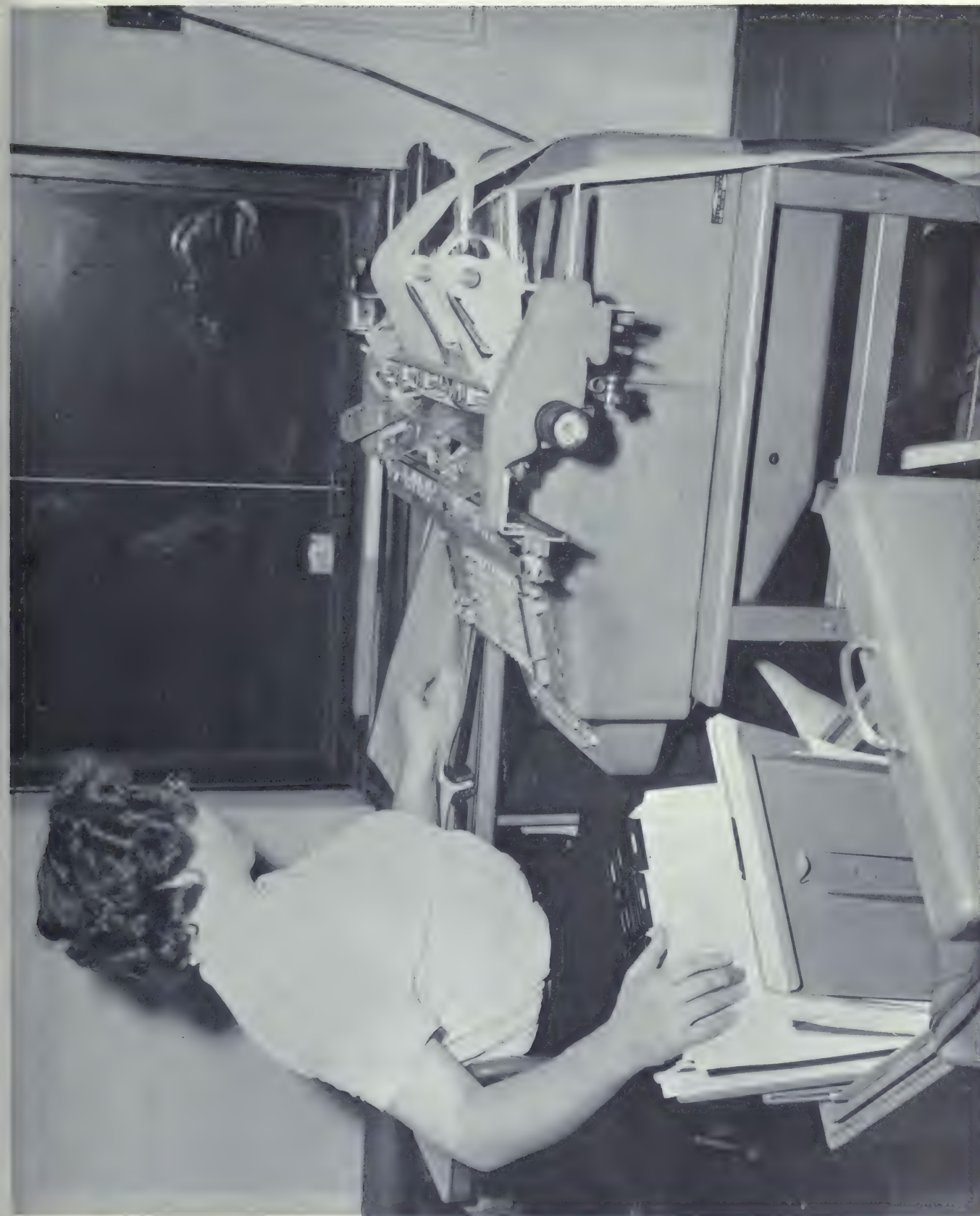
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ACCOUNTS BRANCH





Modern tabulating machines ensure efficient handling of accounts.



Revenue is derived from the sale of licenses.

ACCOUNTS BRANCH

Chief: R. R. MacBean

Assistant Chief: F. M. Baker

INTERNAL AUDIT

Internal Auditor: W. A. Brown
Internal Audit & Field Inspections

SYSTEMS & PROCEDURES

H. F. Damkevala

REVENUE ACCOUNTING

Supervisor: Vacant
Cash Receiving, Accounts Receivable
Issue of Fish & Wildlife Licenses,
Park Permits, Timber Accounts, Land Sales
Land Tax, Rentals

EXPENDITURE & GENERAL ACCOUNTING

Supervisor: Vacant
Payrolls, Accounts Payable
Accounting Machine Operations

LAND TAX ADMINISTRATION

Supervisor: A. C. Molloy
Assessments, Appeals, Addressograph

BUDGET ACCOUNTING

Supervisor: S. E. Neundorf
Budget Estimates & Forecasts,
Financial Reports

SPECIAL ACCOUNTING

Accountant Analyst : Vacant

GENERAL

Secretarial
Department Mail Services
Field Office Trainees

DEPARTMENT OF LANDS AND FORESTS .

ACCOUNTS BRANCH

For the year ending March 31st, 1961, total cash disbursements amounted to \$23,277,048.30, while cash receipts totalled \$21,656,397.06.

Receipts showed a substantial increase when compared with the previous year, due mostly to the sale of Crown timber which increased by \$1,602,000.00 reflecting the woods industries recovery from the recession of the previous year. Sales of hunting and angling licenses again showed a moderate increase and our Provincial parks receipts also reflected the increased use of our recreational facilities.

While over-all departmental activities continued to expand, we were able to maintain the level of our disbursements with that of the previous year. This was due in large part to a favourable fire season with the consequent savings in cost.

In co-operation with the Federal government, a winter works program for the development of camp-site and picnic areas was again carried out.

DEPARTMENT OF
STATEMENT OF RECEIPTS
FOR YEAR ENDING

RECEIPTS

ACCOUNTS BRANCH

Provincial Land Tax	\$1,162,184.63	
Sale of Maps, Casual Fees, etc.	84,096.50	
Lake-of-the-Woods and Lac Seul Storage Dams	<u>26,934.61</u>	\$1,273,215.74

FISH AND WILDLIFE BRANCH

Licenses, Royalty and Sundry (see Statement No. 3)	4,848,110.54
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FOREST PROTECTION BRANCH

Forest Protection Section

Recovery of Fire Fighting Costs and miscellaneous	62,166.39
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Air Service Section

Flying Fees	22,657.21
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LANDS AND SURVEYS BRANCH

Lands Section

Land Sales (Capital)	609,697.96	
Land Rentals		
Leases and Licenses of Occupation	334,474.34	
Other Lands Miscellaneous Receipts	21,123.05	
Park Rentals		
Leases and Licenses of Occupation		
Algonquin	\$ 14,739.36	
Rondeau	17,579.09	
Presqu'ile	3,383.25	
Long Point	3,545.76	
Sundry Parks	<u>318.10</u>	
	<u>39,565.56</u>	1,004,860.91

PARKS BRANCH

Park Concessions		
Rentals	60,868.26	
Permits (all Parks)		
Vehicle	382,887.00	
Campsite	331,480.50	
Boat	7,770.00	
Hunting	2,712.00	
Guide	<u>3,050.00</u>	
	727,899.50	
Miscellaneous	11,676.34	
Government of Canada payments under Campgrounds and Picnic Areas Agreement - Winter Works Program 1959-60	<u>195,128.64</u>	<u>995,572.74</u>
Carried forward		8,206,583.53

DEPARTMENT OF LANDS AND FORESTS

ACCOUNTS BRANCH

FINANCIAL REPORT

FOR YEAR ENDING MARCH 31ST, 1961

1. Cash Receipts and Disbursements

The following summarizes the result of operations for the year:

Total - Cash Disbursements.	\$23,277,048.30	
Cash Receipts	<u>21,656,397.06</u>	
Excess of Disbursements over Receipts		\$1,620,651.24

2. Comparison of Receipts and Disbursements with those of the Previous Two Years

(a) Receipts

<u>Branch</u>	Years ending March 31st		<u>1961</u> \$
	<u>1959</u> \$	<u>1960</u> \$	
Accounts	1,198,661.	1,221,820.	1,273,216.
Fish and Wildlife	4,439,824.	4,622,207.	4,848,111.
Forest Protection	124,050.	126,872.	84,823.
Lands and Surveys	847,762.	1,014,209.	1,004,861.
Parks	643,483.	524,163.	995,573.
Timber	12,854,418.	11,926,007.	13,449,813.
Ontario Fuel Board	129,309.	-	-
	<u>20,237,507.</u>	<u>19,435,278.</u>	<u>21,656,397.</u>

Note - Receipts from Water Power Leases are reported by the Treasury Department.

(b) Disbursements

Chargeable to Ordinary Account	20,259,830.	23,029,901.	23,229,038.
Chargeable to Capital Disbursements (net)	4,167,468.	991,022.	48,010.
	<u>24,427,298.</u>	<u>24,020,923.</u>	<u>23,277,048.</u>

LANDS AND FORESTS

Statement No. 1

AND DISBURSEMENTSMARCH 31ST, 1961.DISBURSEMENTSMAIN OFFICE

Minister's Salary - Statutory		\$12,000.00	
Salaries	\$1,803,089.19		
Travelling Expenses	74,382.73		
Maintenance and Operating	<u>29,947.07</u>	1,907,418.99	
Damage and Other Claims, Sundry Contingencies, etc.		17,126.51	
Compensation for Injured Workmen		123,195.41	
Unemployment Insurance Stamps		65,829.59	
Annuities and Bonuses to Indians		31,560.00	
Advisory Committee to the Minister		<u>3,182.22</u>	\$2,160,312.72

FIELD SERVICESBASIC ORGANIZATION - District Offices

Salaries		12,632,260.76	
Travelling Expenses		654,413.82	
Maintenance and Operating	3,171,757.88		
Equipment - other than Forest Fire Suppression	<u>998,805.97</u>		
	4,170,563.85		
Less: Federal Contribution	<u>678,641.06</u>	<u>3,491,922.79</u>	16,778,597.37

EXTRA FIRE FIGHTING

Wages, etc., Maintenance and Operating		633,924.87	
Forest Fire Suppression Equipment		<u>177,523.01</u>	811,447.88

AIR SERVICE

Salaries		591,937.19	
Travelling Expenses		10,161.07	
Maintenance and Operating		<u>424,515.66</u>	1,026,613.92

LAND AND SURVEYS

Ground Surveys		248,530.25	
Lake-of-the-Woods and Lac Seul Storage Dams - Control and Maintenance		<u>1,371.60</u>	249,901.85
Carried forward			21,026,873.74

RECEIPTS

FOR YEAR ENDING MARCH 31ST, 1961

Brought forward

\$8,206,583.53

TIMBER BRANCH

Timber Section (See Statement No. 2)

Crown Dues \$11,983,087.87

Ground Rent 80,488.00

Forest Protection Charges 1,035,464.03

Interest, Scalpers' Wages, Mill
Licenses, etc. 32,041.74

Cash Deposits (Refunds in Excess of
Deposits) 13,131,081.64
38,664.46

13,092,417.18

Reforestation Section

Sale of Nursery Trees 122,408.03

LOGGING ROADS

Stumpage charges applicable to roads (capital) 234,988.32

TOTAL RECEIPTS \$21,656,397.06

Excess of Disbursements over Receipts 1,620,651.24

\$23,277,048.30

DISBURSEMENTS

Statement No. 1 Cont'd.

FOR YEAR ENDING MARCH 31ST, 1961 .

Brought forward

\$21,026,873.74

PUBLIC INFORMATION AND EDUCATION

Salaries, etc., Maintenance and Operating

174,325.15

GRANTS

Association of Ontario Land Surveyors	\$200.00
Ontario Forestry Association	10,000.00
Jack Miner Migratory Bird Foundation Inc.	3,000.00
Thomas N. Jones	300.00
E. L. Marsh	100.00
Ontario Fur Breeders' Association Inc.	5,000.00
Ontario Council of Commercial Fisheries	2,500.00
Ontario Trappers' Association	1,000.00
Grants to Municipalities and Conservation Authorities (See Statement No. 6)	<u>12,396.16</u>

34,496.16

WOLF BOUNTY

\$48,741.00

BEAR BOUNTY4,150.00

52,891.00

PARKS IMPROVEMENTS

Acquisition of Land	409,925.43
Land Improvements	1,397,029.75
Construction of Major Buildings	92,557.12
Other Buildings and Structures	342,630.39
Picnic Tables, Grills, Refuse Containers and other Equipment	<u>157,764.67</u>

\$2,399,907.36
<u>608,365.51</u>

1,791,541.85

Less: Federal Contribution

MAINTENANCE OF ACCESS ROADS

Salaries, etc., Maintenance and Operating

148,910.60

LOGGING ACCESS ROADS

Construction Costs

48,009.80TOTAL DISBURSEMENTS\$23,277,048.30

DEPARTMENT OFTIMBERTIMBERANALYSIS OF CASHFOR YEAR ENDING

DISTRICT	CROWN DUES	GROUND RENT	FOREST PROTECTION CHARGES	INTEREST SCALERS' WAGES MILL LICENSES ETC.
Chapleau	\$476,167.91	\$1,030.00	\$13,184.00	\$677.90
Cochrane	1,246,697.80	5,942.00	76,030.60	2,195.89
Fort Frances	214,357.34	803.00	10,278.40	117.40
Geraldton	1,915,860.03	14,600.00	186,880.00	112.00
Gogama	456,076.36	1,395.00	17,856.00	34.60
Kapuskasing	1,752,877.96	7,344.00	94,003.20	4,899.47
Kenora	925,409.16	10,475.00	134,080.00	1,619.63
Lindsay	56,596.54	204.00	2,611.20	167.91
North Bay	799,075.45	3,707.00	47,435.80	2,551.67
Parry Sound	259,596.15	1,324.00	16,947.10	8,071.98
Pembroke	449,406.60	3,443.00	44,998.01	3,295.96
Port Arthur	1,007,160.88	11,994.00	151,743.00	1,396.78
Sault Ste. Marie	639,540.87	3,780.00	49,781.54	833.64
Sioux Lookout	592,505.74	1,134.00	14,501.40	741.43
Sudbury	161,675.72	4,620.00	61,555.58	335.38
Swastika	410,875.48	2,053.00	27,092.40	2,309.23
Tweed	211,905.42	528.00	6,758.40	946.91
White River	404,947.77	6,112.00	79,727.40	541.81
Other Districts	2,354.69			1,192.15
	\$11,983,087.87	\$80,488.00	\$1,035,464.03	\$32,041.74

Percentage of Total
Timber Revenue

91.26

0.61

7.89

0.24

LANDS AND FORESTS

Statement No. 2

BRANCHSECTIONRECEIPTS BY DISTRICTSMARCH 31ST, 1961

TOTAL TIMBER REVENUE	CASH DEPOSITS RECEIVED AND REFUNDED	TOTAL TIMBER REVENUE AND CASH DEPOSITS	PERCENTAGE OF TOTAL TIMBER REVENUE AND CASH DEPOSITS
\$491,059.81	\$8,200.00 (Cr.)	\$482,859.81	3.69
1,330,866.29	6,946.37	1,337,812.66	10.22
225,556.14	2,934.00 (Cr.)	222,622.14	1.70
2,117,452.03		2,117,452.03	16.17
475,361.96	975.69 (Cr.)	474,386.27	3.62
1,859,124.63		1,859,124.63	14.20
1,071,583.79	1,433.00	1,073,016.79	8.20
59,579.65	2,035.25 (Cr.)	57,544.40	0.44
852,769.92	7,872.97 (Cr.)	844,896.95	6.45
285,939.23	8,071.48 (Cr.)	277,867.75	2.12
501,143.57	25,632.08 (Cr.)	475,511.49	3.63
1,172,294.66	1,452.60 (Cr.)	1,170,842.06	8.94
693,936.05	4,568.13 (Cr.)	689,367.92	5.27
608,882.57	3,400.00	612,282.57	4.68
228,186.68	15,900.00	244,086.68	1.86
442,330.11	934.99	443,265.10	3.39
220,138.73	5,536.62 (Cr.)	214,602.11	1.64
491,328.98		491,328.98	3.75
3,546.84		3,546.84	0.03
\$13,131,081.64	\$38,664.46 (Cr.)	\$13,092,417.18	100.00%

100.00%

DEPARTMENT OF LANDS AND FORESTS

Statement No. 3

FISH AND WILDLIFE BRANCH

ANALYSIS OF CASH RECEIPTS

FOR YEAR ENDING MARCH 31ST, 1961

GAME

Licenses

Trapping	\$37,274.00
Non Resident Hunting	797,213.25
Deer	493,361.27
Moose	280,273.65
Ground Hog	29,151.56
Gun	298,594.35
Dog	24,515.55
Pheasants	4,760.00
Fur Dealers	3,300.00
Fur Farmers	5,090.00
Tanners	100.00
Cold Storage	<u>267.00</u>
	\$1,973,900.63

Royalty
Game

242,210.27 \$2,216,110.90

FISHERIES

Licenses

Commercial Fishing	\$90,592.00
Smelt	18,322.45
Angling	<u>2,435,611.47</u>
	\$2,544,525.92

Royalty
Commercial Fish

1,253.46 2,545,779.38

GENERAL

Licenses
Guides

\$12,140.00

Wild Rice 45.00

Tags 1,559.60

Fines 48,556.65

Costs Collected 1,064.09

Sales - Confiscated Articles, etc. 19,217.24
- General 2,081.21

Miscellaneous 1,556.47

86,220.26
\$4,848,110.54

DEPARTMENT OF LANDS AND FORESTS

Statement No. 4

RESEARCH BRANCH

STATEMENT OF EXPENDITURE

FOR THE YEAR ENDING MARCH 31st, 1961

PROGRAMS

Forestry	\$316,562.73
Fisheries	269,903.63
Mechanical	31,025.36
Physical	33,896.15
Statistics and Design	18,808.93
Wildlife	111,163.51
Branch Administration	67,068.37
Maintenance Costs	55,361.02
Equipment Costs Unallocated	528.75
	<hr/>
	\$904,318.45
	<hr/>

TOTAL EXPENDITUREFOR THE YEAR ENDING

<u>Ordinary Expenditure</u>	<u>Total</u> \$	<u>Forest Protection</u> \$	<u>Lands</u> \$	<u>Timber</u> \$
Main Office	2,160,313.	411,738.	199,248.	526,313.
Surveys	249,902.			
Basic Organization (before deduction of Federal Con- tribution, \$678,641.)	17,457,238.	4,842,692.	482,444.	5,384,511.
Extra Fire Fighting (wages and equipment)	811,448.	811,448.		
Public Information	174,325.	24,406.	3,486.	15,689.
Air Service	1,026,614.			
Grants	34,496.			12,396.
Wolf and Bear Bounties	52,891.			
Park Improvements (before deduction of Federal Con- tribution, \$608,365.)	2,399,907.			
Maintenance (Access Roads)	148,911.	25,687.	82,065.	35,545.
	24,516,045.	6,115,971.	767,243.	5,974,454.

Distribution of General Expenditure and Administration Costs Over Main Services

Air Service (as per analysis)	582,842.	35,684.	142,737.
Field Administration (pro rated)	465,992.	55,823.	510,650.
- percentage	27%	3%	30%
Research (as per analysis)	50,293.		383,622.
Surveys (pro rated)	6,215.	478,579.	68,369.
- Percentage	1%	77%	11%
	24,516,045.	7,221,313.	1,337,329.
			7,079,832.

Less: Federal Contributions Applied as Credits:

Canada Forestry Act				
- Forest Resources				
Inventory	185,786.	46,447.	27,868.	74,314.
(pro rated in keeping with costs)		25%	15%	40%
- Reforestation	178,274.			178,274.
- Forest Fire Protection	281,224.	281,224.		
Fur Management Agreement	33,357.			
Camp Grounds-Picnic Areas Agreement	608,366.			
TOTAL ORDINARY EXPENDITURE	23,229,038.	6,893,642.	1,309,461.	6,827,244.
Capital Disbursements				
Construction of Logging Access Roads	48,010.			48,010.
TOTAL DISBURSEMENTS	23,277,048.	6,893,642.	1,309,461.	6,875,254.
Percentage of Total		30%	5%	30%

LANDS AND FORESTS

Statement No. 5

ALLOCATED TO MAIN SERVICES RENDERED

31ST MARCH, 1961

<u>Fish and Wildlife</u> \$	<u>Parks</u> \$	<u>Air Service</u> \$	<u>Research</u> \$	<u>Surveys</u> \$	<u>Field Administration</u> \$
356,481.	329,350.		14,699.	305,357. 249,902.	17,127.
2,584,489.	1,370,441.	162,861.	904,319.	34,983.	1,690,498.
74,960.	52,298.		3,486.		
11,900.		1,026,614.		200.	10,000.
52,891.					
	2,399,907.				
	5,614.				
3,080,721.	4,157,610.	1,189,475.	922,504.	590,442.	1,717,625.
404,422.	23,790.	*1,189,475.			
257,644.	373,583.		22,844.	31,089.	*1,717,625.
15%	22%		1%	2%	
511,433.			*945,348.		
6,215.	62,153.			*621,531.	
1%	10%				
4,260,435.	4,617,136.				
37,157.					
20%					
33,357.					
	608,366.				
4,189,921.	4,008,770.				
4,189,921.	4,008,770.				
18%	17%				

* Deductions

GRANTS TO MUNICIPALITIES AND CONSERVATION AUTHORITIESUNDER THE FORESTRY ACT, RSO 1960Conservation Authorities:

Ausable River	\$520.32
Big Creek Region	5,300.30
North Grey Region	4,902.67
Otter Creek	1,534.17
Saugeen Valley	138.70
	<hr/>
	<u>\$12,396.16</u>

TREND OF TOTAL ANNUAL RECEIPTS

FOR THE TEN YEARS ENDED 31st. MARCH 1961

(DOES NOT INCLUDE MISSISSAGI SALVAGE PROJECT)

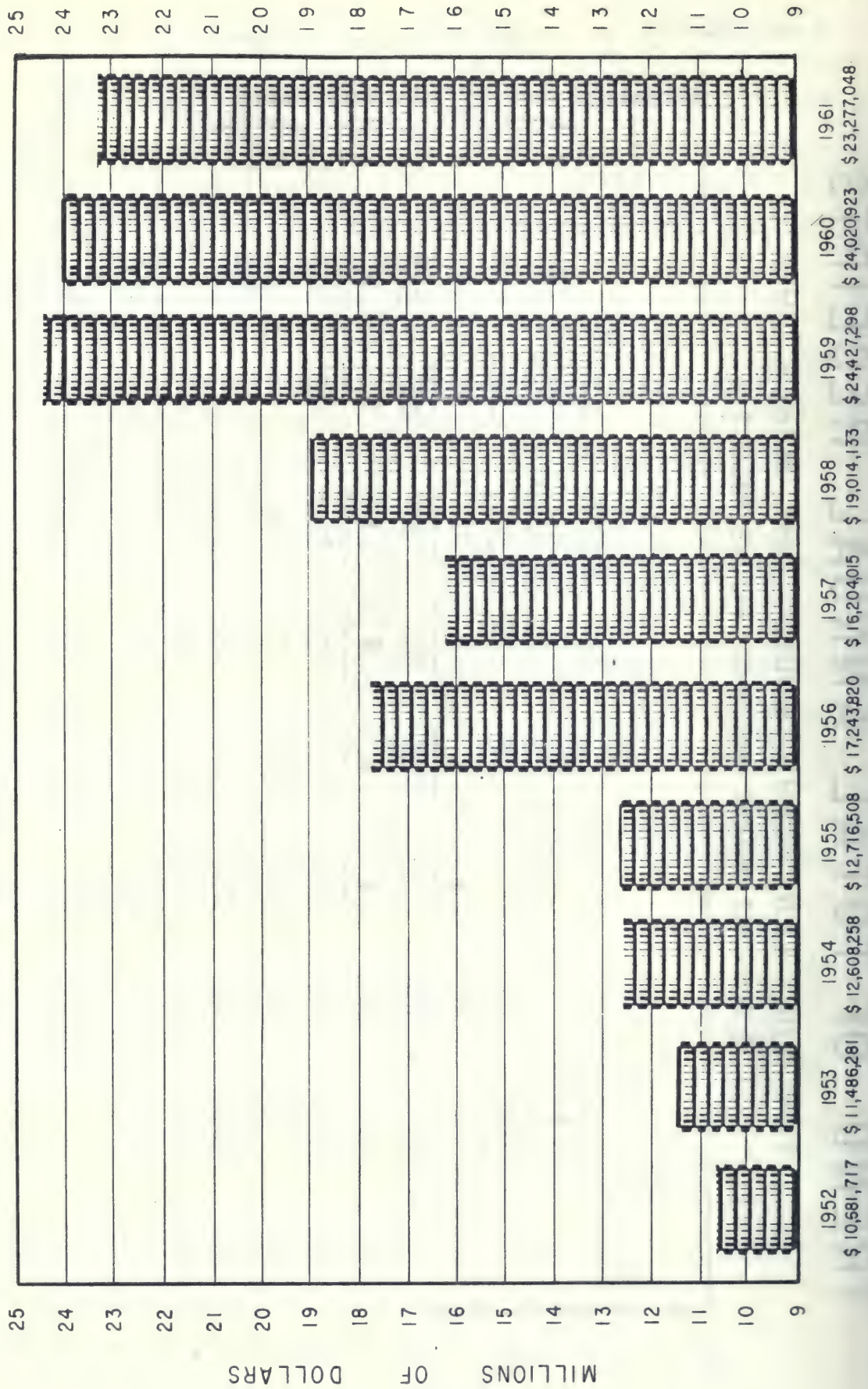


⁽¹⁾...WATER POWER REVENUE REPORTED BY TREASURY DEPARTMENT.

TREND OF TOTAL ANNUAL DISBURSEMENTS

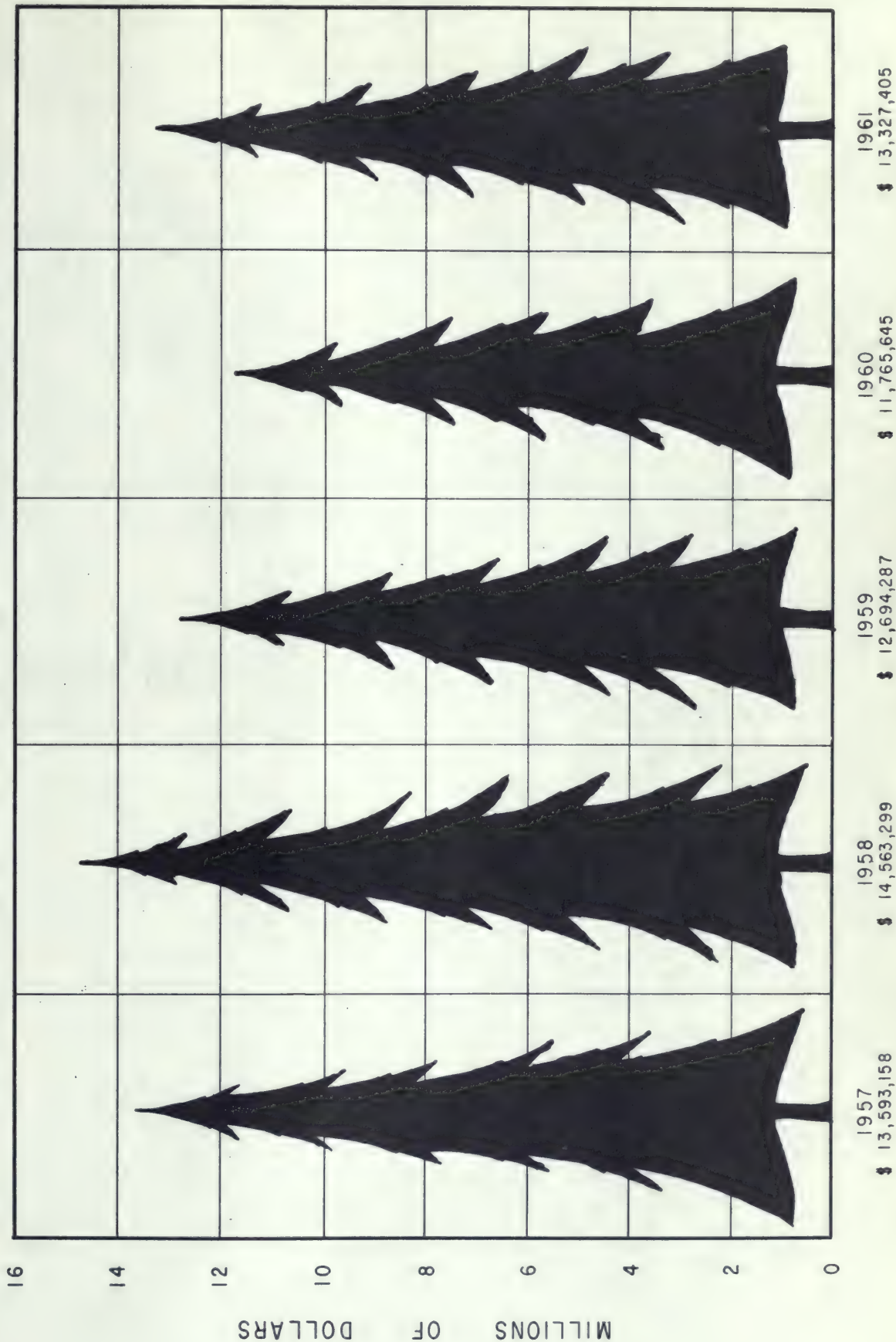
FOR THE TEN YEARS ENDED 31st. MARCH 1961

(DOES NOT INCLUDE MISSISSAGI SALVAGE PROJECT)



TREND OF DEPARTMENTAL TIMBER REVENUE

CROWN DUES - GROUND RENT & FIRE PROTECTION CHARGES
FOR THE FIVE YEARS ENDED 31st. MARCH 1961



FISH AND WILDLIFE BRANCH



A Conservation Officer seals a beaver skin for a licensed trapper near Kinmount, Lindsay District.

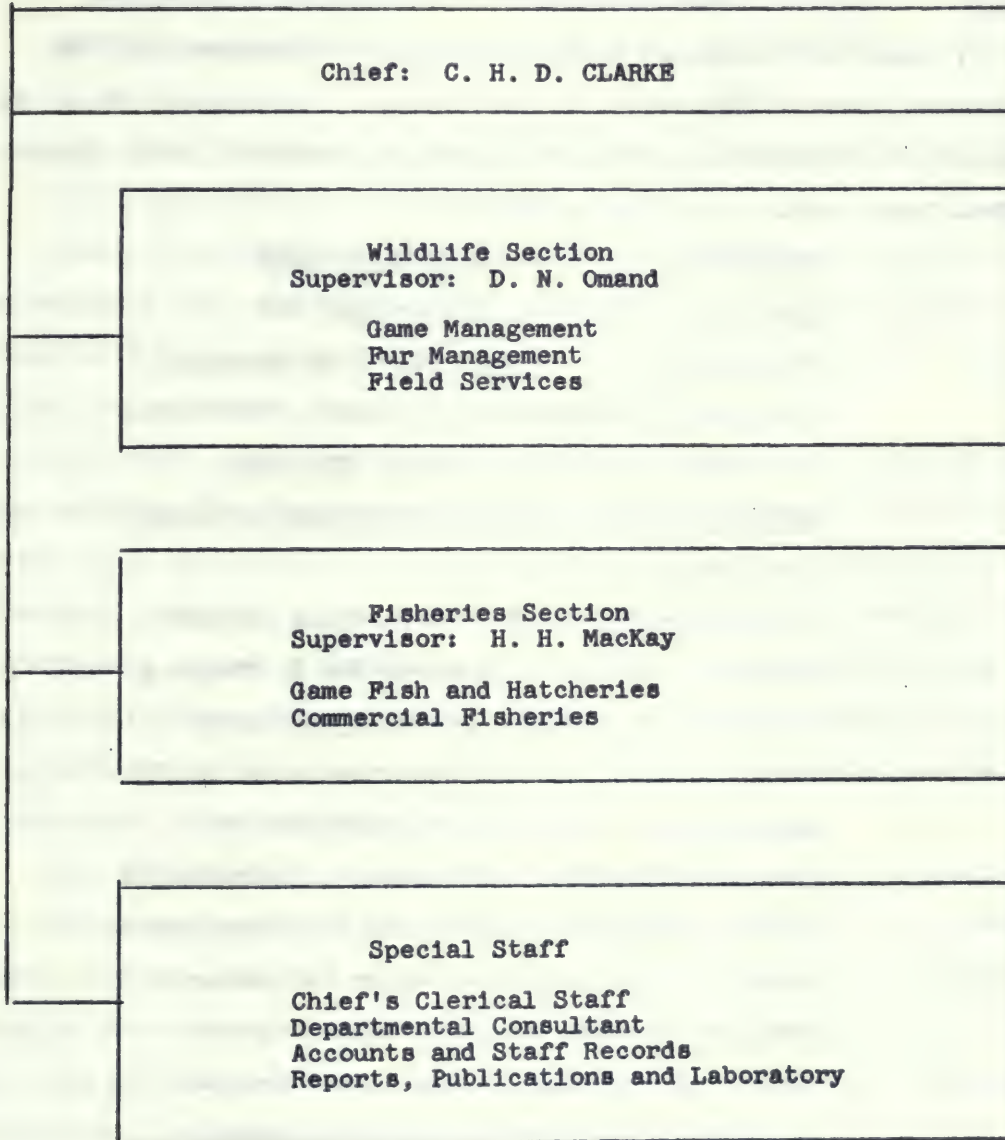


Testing the oxygen content of Black Donald Lake, Tweed District, one of the tests by which Ontario Lakes are classified for fishing potential and species suitability.



Tagging a rainbow trout taken from the fish ladder at the dam near Alliston,
Lake Simcoe District.

FISH AND WILDLIFE BRANCH



On July 5, 1960, the Chief of the Fish and Wildlife Branch, Dr. W.J.K. Harkness, died. Although he had not been in the best of health, his passing was sudden and unexpected, and an enormous loss to the Department and to fisheries and wildlife management everywhere.

A committee appointed during the winter recommended that the Fisheries Research Laboratory at Lake Opeongo, in Algonquin Park, be renamed The Harkness Laboratory of Fisheries Research, and a plaque be placed there with the following wording:

William John Knox Harkness 1896-1960
Associate Professor of Limnology and
Director of the Ontario Fisheries Research
Laboratory, Department of Zoology, University
of Toronto, 1924-1946; Chief, Fish and
Wildlife Branch, Ontario Department of Lands
and Forests, 1946-1960.

After many years spent in carrying out and directing fisheries research and in training fisheries scientists, Dr. Harkness undertook the direction of fisheries and wildlife management in the Ontario Department of Lands and Forests. His memory is perpetuated by the research completed and published under his direction, by the devotion and achievements of the men whom he trained, by the fisheries and wildlife management program of this Province and by the intelligent public interest in fish and wildlife which he aroused in all those whom he met. This laboratory, which bears his name, was established by the Department of Lands and Forests in 1935, when he was invited by the Department to make Algonquin Park the centre of the field work of the Ontario Fisheries Research Laboratory.

FISH AND WILDLIFE BRANCH

Wildlife Section

Open Seasons

MOOSE

Schedule 1 - Residents and Non-Residents - October 1st to December 24th, 1960.

(1) The District of Kenora, except that portion defined in Schedule 2;

(ii) The District of Thunder Bay;

(iii) That portion of the District of Algoma lying north of Lake Superior easterly and southerly from the boundary between Thunder Bay and Algoma Districts to the south-west corner of Township 31, Range 22, thence easterly to the south-east corner of Township 24, Range 22;

(iv) That portion of the District of Sudbury lying north and west of a line easterly from the south-west corner of lot 23, Range 15, to the south-east corner of lot 8Z, Range 15, southerly to the south-west corner of Comox Township, easterly to the south-east corner of Athlone Township, northerly to the south-west corner of Inverness Township, easterly to the south-east corner of Browning Township, northerly to the north-east corner of Zavitz Township, westerly to the north-west corner of Crothers Township, and northerly to the north-east corner of Frey Township; and

(v) The District of Cochrane, except that portion lying south of the most northerly transcontinental line of the C.N.R. from the east boundary of Sargeant Township westerly to the west boundary of Haggart Township and southerly to the south-west corner of Whitesides Township and north of a line easterly from the south-west corner of Whitesides Township to the south-east corner of Dokis Township.

Schedule 2 - Residents only - October 1st to December 24th, 1960.

That portion of the District of Kenora lying south of the most northerly transcontinental line of the C.N.R. easterly from the Manitoba boundary to the northerly production of the west boundary of the Township of Smellie; west of that southerly production and the west boundaries of the townships of Smellie and Docker to the south-east corner of the Township of Bridges; and westerly along the south boundaries of the townships of Bridges, Tustin and MacNicol to the 7th Meridian; and southerly along the 7th Meridian to the

south boundary of the District of Kenora; north of the south boundary of the District of Kenora and the international boundary between Canada and the U.S. westerly to the Manitoba boundary; and east of the Manitoba boundary northerly to the point of commencement on the most northerly line of the C.N.R.

Schedule 3 (a) - Residents only - October 15th to December 24th, 1960.

(b) - Non-Residents - October 15th to November 15th, 1960.

Commencing at the intersection of the centre line of the right-of-way of the most northerly east-west line of the Canadian National Railways with the boundary between Ontario and Quebec; thence westerly along that centre line to its intersection with the easterly boundary of the geographic Township of Shackleton in the Territorial District of Cochrane; then southerly along the easterly boundaries of the geographic townships of Shackleton, Carmichael, Ford, Oke, Aitken, Fortune, and Enid, to the south-easterly corner of the last-mentioned geographic township; thence southerly along the easterly boundaries of the geographic townships of Frey, Sewell, and Kenogaming, in the Territorial District of Sudbury, to the south-westerly corner of the geographic Township of Pharand in the Territorial District of Timiskaming; thence easterly along the southerly boundaries of the geographic townships of Pharand, Childerhose, Doyle, Musgrove, Bartlett, and Geikie, to the south-easterly corner of the last-mentioned geographic township; thence southerly along the westerly boundaries of the geographic townships of Hincks, Montrose, Midlothian, Raymond, Knight, Tyrrell, Leonard, North Williams, and Dufferin, to the south-westerly corner of the last-mentioned geographic township; thence westerly along the southerly boundaries of the geographic townships of Browning, Amyot, Moffat, Hennessy, and Inverness, in the territorial District of Sudbury, to the south-westerly corner of the last-mentioned geographic township; thence southerly along the westerly boundaries of the geographic townships of Brebeuf, Baynes, Dublin, and Muldrew, to the south-westerly corner of the last-mentioned geographic township; thence westerly along the southerly boundaries of the geographic townships of Athlone, LaFleche, Alton, Jasper, Durban, Ethel, and Comox, to the south-westerly corner of the last-mentioned geographic township; thence

northerly along the westerly boundaries of the geographic townships of Comox, Fulton, and Iris, to the north-westerly corner of the last-mentioned geographic township; thence westerly along the southerly boundaries of geographic townships 8Z, 8A, 8C, 8D, 8E, 8F, 8G, 8H, 22 Range 15, and 23 Range 15, to the south-westerly corner of the last-mentioned geographic township; thence northerly along the easterly boundaries of geographic Township 24 in Ranges 15, 16, 17, 18, 19, 20, and 21, to the north-easterly corner of the last-mentioned geographic township; thence westerly along the northerly boundaries of geographic townships 24, 25, 26, 27, 28, 29, 30 and 31, in Range 21 to the shore of Lake Superior; thence northerly and westerly along the shore of Lake Superior to the boundary between the territorial districts of Algoma and Thunder Bay, thence southerly along that boundary to the boundary between Canada and United States; thence south-easterly along that boundary through Lake Superior and the St. Mary River to a point in that boundary due south of the intersection of the boundary between the geographic townships of Parke and Awenge, in the Territorial District of Algoma, with the northerly shore of the St. Mary River; thence due north to the northerly shore of the St. Mary River; thence in a general easterly direction following the mainland of the northerly shores of the St. Mary River and expansions thereof and the North Channel of Lake Huron to the south-westerly corner of the geographic Township of Spragge, and the northerly shores of the Serpent River and Serpent Lake to the easterly boundary of the Serpent River Indian Reserve; thence southerly following that boundary $1\frac{1}{2}$ miles, more or less, to its intersection with the northerly limit of that part of King's Highway known as number 17; thence in a general easterly direction following that northerly limit to the easterly boundary of the geographic Township of Hagar in the Territorial District of Sudbury; thence northerly along the easterly boundaries of the geographic townships of Hagar, Loughrin, Davis, Kelly, and McCarthy, to the north-easterly corner of the last-mentioned geographic township; thence westerly along the northerly boundary of the geographic Township of McCarthy to the north-westerly corner thereof; thence northerly along the easterly boundaries of the geographic townships of McConnell and Demorest to the north-easterly corner of the last-mentioned

geographic township; thence westerly along the northerly boundary of the geographic Township of DeMorest to the north-westerly corner thereof; thence northerly along the westerly boundary of the geographic Township of Turner to the north-westerly corner thereof; thence easterly along the northerly boundary of the Township of Turner to the south-westerly corner of the geographic township of Dundee; thence northerly along the westerly boundaries of the geographic townships of Dundee and Parker to the north-westerly corner of the last-mentioned geographic township; thence easterly along the northerly boundary of the geographic Township of Parker to the south-easterly corner of the geographic Township of Gamble in the Territorial District of Timiskaming; thence northerly along the easterly boundaries of the geographic townships of Gamble and Brewster to the north-easterly corner of the last-mentioned geographic township; thence easterly along the northerly boundaries of the geographic township of Trethewey, Whitson, Van Nostrand, Klock, Barr, Firstbrook and Bucke, to the shore of Lake Timiskaming; thence north-easterly, south-easterly, northerly, and easterly, along the shore of that lake to the boundary between Ontario and Quebec; thence northerly along that boundary to the place of commencement.

Schedule 8 - Residents only - November 1st to November 7th, 1960. Commencing at the south-west corner of the geographic Township of Harrow in the Territorial District of Sudbury; thence easterly following the mainland of the northerly shores of the North Channel and Georgian Bay of Lake Huron to the intersection with the boundary between the geographic Township of Humboldt in the Territorial District of Manitoulin, and the geographic Township of Travers in the Territorial District of Sudbury; thence in a general easterly direction along the southerly boundaries of the townships of Travers, Struthers, Allen, Bigwood and Mason to the south-easterly corner of the geographic Township of Mason; thence northerly along the easterly boundaries of the geographic townships of Mason, Cosby, Cherriman and Jennings to the north-easterly corner of the geographic Township of Jennings; thence easterly along the southerly boundary of the geographic Township of Appleby to the south-easterly corner of that geographic township; thence northerly along the easterly boundary of that geographic township

and the geographic Township of Hagar to the intersection with the southerly limit of that part of the King's Highway known as number 17; thence in a general westerly direction following that southerly limit to the west boundary of the geographic Township of May in the Territorial District of Sudbury; thence southerly along that boundary and the west boundary of the geographic Township of Harrow to the point of commencement.

Schedule 9 - Residents only - October 1st to December 24, 1960.

Commencing at the intersection of the boundary between the territorial districts of Rainy River and Thunder Bay with the Boundary between Canada and the United States; thence northerly along the boundary between the territorial districts of Rainy River and Thunder Bay to the 3rd Base Line; thence westerly along that base line, being the boundary between the territorial districts of Kenora and Rainy River, to the 6th Meridian; thence southerly along that meridian and its production to Swell Bay of Rainy Lake; thence in a south-westerly direction through that bay to a point in the boundary between Canada and United States southerly and easterly of Sandpoint Island; thence easterly along that boundary to the boundary between the territorial districts of Rainy River and Thunder Bay, being the point of commencement.

Schedule 10 - Residents only - October 15th to November 25th, 1960.

Commencing at the intersection of the northerly boundary of the geographic Township of Bucke, in the Territorial District of Timiskaming, with the westerly shore of Lake Timiskaming; thence southerly along the westerly shore of Lake Timiskaming and the Ottawa River to its confluence with the northerly shore of the Mattawa River, being the south-easterly corner of the Township of Mattawan, in the Territorial District of Nipissing; thence in a general westerly direction following the southerly boundaries of the geographic townships of Mattawan, Olrig, Phelps, and Widdifield, to the easterly shore of Lake Nipissing; thence southerly along the shore to the southerly boundary of the Territorial District of Nipissing; thence westerly along that boundary to the intersection with a line drawn east astronomically from the north-easterly corner of the geographic Township of Scollard in the Territorial District of Sudbury; thence west astronomically to the

north-easterly corner of the geographic Township of Scollard; thence in a general westerly direction along the southerly boundary of that geographic township to the south-easterly corner of the geographic Township of Mason; thence northerly along the easterly boundaries of the geographic townships of Mason, Cosby, Cherriman and Jennings, to the north-easterly corner of the geographic Township of Jennings; thence easterly along the southerly boundary of the geographic Township of Appleby to the south-easterly corner of that geographic township; thence northerly along the easterly boundaries of the geographic townships of Appleby, Hagar, Loughrin, Davis, Kelly, and McCarthy, to the north-easterly corner of the last-mentioned geographic township; thence westerly along the northerly boundary of the geographic Township of McCarthy to the north-westerly corner thereof; thence northerly along the easterly boundaries of the geographic townships of McConnell and DeMorest to the north-easterly corner of the last-mentioned geographic township; thence westerly along the northerly boundary of the geographic Township of DeMorest to the north-westerly corner thereof; thence northerly along the westerly boundary of the geographic Township of Turner to the north-westerly corner thereof; thence easterly along the northerly boundary of the geographic Township of Turner to the south-westerly corner of the geographic Township of Dundee; thence northerly along the westerly boundaries of the geographic townships of Dundee and Parker to the north-westerly corner of the last-mentioned geographic township; thence easterly along the northerly boundary of the geographic Township of Parker to the south-easterly corner of the geographic Township of Gamble in the Territorial District of Timiskaming; thence northerly along the easterly boundaries of the geographic townships of Gamble and Brewster to the north-easterly corner of the last-mentioned geographic township; thence easterly along the northerly boundaries of the geographic townships of Trethewey, Whitson, van Nostrand, Klock, Barr, Firstbrook, and Bucke, to the westerly shore of Lake Timiskaming, being the place of commencement.

DEER

Schedule 4 - October 22nd to November 25th, 1960.

The District of Rainy River.

Schedule 5 - October 22nd to November 25th, 1960.

(i) The District of Kenora; and

(ii) Those parts of the Districts of Thunder Bay and Cochrane lying north of the most northerly transcontinental line of the C.N.R.

Schedule 6 - October 15th to November 25th, 1961.

(i) That part of the District of Thunder Bay lying south of the most northerly transcontinental line of the C.N.R.

(ii) Those parts of the Districts of Algoma, Cochrane, Sudbury and Timiskaming lying south of the most northerly transcontinental line of the C.N.R. and north of a line from the southeast corner of Harris Township westerly to the southwest corner of Wallis Township, southerly to the southeast corner of Gamble Township, westerly to the southwest corner of Dufferin Township, northerly to the Elk Lake-Westree Road where it intersects the west boundary of Tyrrell Township, southwesterly along that road to Westree on the C.N.R., southerly along the C.N.R. to a point where it intersects the south boundary of Hennessy Township, westerly to the southwest angle of Inverness Township, southerly to the south-east corner of Morse Township, westerly to the southwest angle of X Township, northerly to the northwest angle of 7Z Township, westerly to the southwest corner of Township 23, Range XV, southerly to the southeast angle of Township 24, Range 15, and westerly along the south boundaries of townships 24, 25, 26, Home, 28 and 29, Range 15, and westerly to the international boundary.

Schedule 7 - November 1st to November 25th, 1960.

Those parts of the District of Algoma, Manitoulin, Nipissing, Sudbury and Timiskaming south of Schedule 6 and north of the French and Mattawa Rivers, the north shore of Georgian Bay, the north shore of the North Channel and including Cockburn and Philip Edward Islands, but excluding St. Joseph Island.

Schedule 11 - October 19th to November 12th, 1960 - Bows and arrows only.

November 14th to November 25th, 1960.

The District of Manitoulin except Cockburn and Philip Edward Islands.

Schedule 12 - November 7th to November 19th, 1960.

1. The Territorial District of Parry Sound.
2. The Territorial District of Muskoka except the geographic townships of Medora and Wood.
3. The Territorial District of Nipissing lying south of the northerly boundary of the geographic Township of West Ferris, Trout Lake and the Mattawa River.
4. The Provisional County of Haliburton.
5. The County of Lanark.
6. The County of Renfrew.
7. That part of the Township of North Crosby in the County of Leeds, lying north and east of the Mass Road from the west boundary of the County of Leeds through Westport to and along the north shore of Upper Rideau Lake.
8. The counties of Hastings, Lennox and Addington and Peterborough lying north of that part of the King's Highway known as Number 7.
9. That part of the County of Frontenac
 - (a) lying north of that part of the King's Highway known as Number 7; and
 - (b) lying south of that part of the King's Highway known as Number 7, east of that part of the King's Highway known as Number 38 and north of the County Road known as Number 8 and the connecting road from it to Godfrey.
10. The Township of Somerville and those parts of the townships of Laxton, Digby and Longford, and Dalton lying north of the Monk Road in the County of Victoria.
11. The townships of Mara and Rama in the County of Ontario.

CARIBOU

No open season.

BEAR

No closed season. (Licences necessary)

HUNGARIAN PARTRIDGE

. September 24 to November 19, 1960.

Throughout the Province with the exception of the District of Thunder Bay.

Bag Limits: 8 per day. Possession Limits: 16.

PHEASANTS

1. October 26 and 27.

Township of Pelee in the County of Essex. Bag Limits: 10 males.

2. October 12 to October 29.

Counties of Brant, Bruce, Dufferin, Grey, Halton, Huron, Peel, Perth, Simcoe, Waterloo, Wellington, and Wentworth; and the townships of Georgina and North Gwillimbury in the County of York.

3. October 19 to October 29.

Townships of East Gwillimbury, King, Markham, Vaughan and Whitchurch in the County of York; Townships of East Whitby, Pickering and Whitby in the County of Ontario; and Oxford County.

4. October 29 to November 12.

Counties of Elgin, Haldimand, Kent, Lambton, Lincoln, Middlesex, Norfolk, Welland and Essex with the exception of Pelee Island.

5. October 8 to October 29.

Any part of Ontario except the areas described in paragraphs 1, 2, 3 and 4.

Bag Limits: Paragraphs 2 to 5: Three per day, of which not more than one shall be a female.

Time in all Schedules: 8.00 a.m. to 5.00 p.m.

RUFFED GROUSE, SHARPTAILED GROUSE, SPRUCE PARTRIDGE

(a) September 15 to November 25.

Throughout the area north and west of Highway 17 from Mattawa to Sault Ste. Marie.

(b) September 24 to November 19.

South of Highway 17 and north and east of a line defined by the northerly boundary of Freeman Township in the District of Muskoka, Highways 69 and 12 in the Townships of Rama, Mara, Thorah, Brock and Reach in Ontario County, and north of the northerly boundaries of Whitby and East Whitby Townships in

Ontario County and of Darlington Township in Durham County, and the north and east boundary of Clarke Township in Durham County.

(c) . October 8 to October 29.

Townships of Clarke and Darlington in Durham County.

(d) October 1 to November 19.

Throughout the rest of the Province, with the exception of the Townships of Whitby, East Whitby, Pickering and Scugog in Ontario County, and the Townships of Markham, Whitchurch, Vaughan, King, and East Gwillimbury in York County, where the season will be closed.

Bag Limits: Aggregate total of five per day. Possession Limits: Aggregate total of 20.

PTARMIGAN

September 1, 1960 to April 1, 1961.

Throughout Ontario. Bag Limits: Five per day. Possession Limits: 15.

RABBIT

(a) October 8, 1960 to February 28, 1961.

Townships of Clarke and Darlington in the County of Durham.

(b) October 12, 1960 to February 28, 1961.

(i) Counties of Brant, Halton, Peel and Wentworth;

(ii) Townships of Adjala, Tecumseth and West Gwillimbury in the County of Simcoe;

(iii) Township of Wilmot in the County of Waterloo; and

(iv) Township of Puslinch in the County of Wellington.

(c) October 19, 1960 to February 28, 1961.

(i) Townships of East Gwillimbury, King, Markham, Vaughan and Whitchurch in the County of York;

(ii) Townships of Whitby, East Whitby and Pickering in the County of Ontario; and

(iii) County of Oxford.

(d) October 28, 1960 to February 28, 1961.

Township of Pelee in the County of Essex.

(e) October 29, 1960 to February 28, 1961.

County of Essex, except the Township of Pelee, and the Counties of Elgin, Haldimand, Kent, Lambton, Lincoln, Middlesex, Norfolk and Welland.

(f) September 15, 1960 to October 31, 1961.

Any part of Ontario not referred to in clauses a,b,c,d or e.

SQUIRREL (Black, Grey, Fox)

October 1 to November 30, 1960.

Any part of Ontario. Bag Limits: 10 per day. Possession Limits: 10.

RACCOON

September 15, 1960 to October 31, 1961.

Any part of Ontario.

FOX

September 15, 1960 to October 31, 1961.

Any part of Ontario.

Migratory Birds

DUCKS, GEESE, RAILS, COOTS, GALLINULES, WOODCOCK and WILSON's SNIFE

In the Northern District

September 15 to December 15, 1960.

In the Central District

September 24 to December 15, 1960.

In the Southern District (except that in Essex County the open season for geese is from 12 noon October 1 to December 31 inclusive.)

12 noon October 1 to December 15, 1960.

1. The open seasons include the opening and closing dates, except that in the Southern District the open season commences at 12 noon, local time, on the opening date.

2. (a) the Northern District of Ontario comprises the Territorial Districts of Kenora, Patricia, Rainy River, Thunder Bay, Cochrane, and Timiskaming; and those portions of Algoma, Sudbury and Nipissing lying northerly of Highway 17 between Mattawa and Sault Ste. Marie and northerly of the International Boundary between Sault St. Marie and Lake Superior;

(b) the Southern District of Ontario comprises: those parts of Muskoka District and Simcoe County lying west of Highway 69; in Ontario County, those parts of the townships of Rama, Mara, Thorah, Bröck and Reach lying west of Highways 69 and 12, and the townships of Scott, Uxbridge, Pickering, Whitby, and East Whitby; in Durham County, the townships of Darlington and Clarke; and the counties of Brant, Bruce, Dufferin, Elgin, Essex, Grey, Haldimand, Halton, Huron, Kent, Lambton, Lincoln, Middlesex, Norfolk, Oxford, Peel, Perth, Waterloo, Welland, Wellington, Wentworth and York; and

(c) the Central District of Ontario comprises all the part of the Province which is not included in the Northern District or the Southern District.

Daily Bag Limits	Ducks	Geese	Coots, Rails & Gallinules	Wilson's Snipe	Woodcock
	6	(a) 5 (b) (c)	6	8	8
Possession Limits	12	(d) 10	(e) 12	16	16

(a) Exclusive of mergansers.

(b) Of which not more than one may be a wood duck.

(c) Of which not more than one may be a canvasback or redhead.

(d) Of which not more than one may be a canvasback or redhead.

(e) Persons resident more than 25 miles from James Bay may not kill more than 15 geese within 25 miles of James Bay during the 1960 season.

BEAVER

1. October 15th, 1960 to April 15th, 1961. (by Quota Only)

In that part of Ontario lying north of the northernmost line of the C.N.R. except in the Big Trout, Big Beaverhouse, Kasabonika and Bearskin Band Areas where there is no open season.

2. October 15th, 1960 to March 31st, 1961. (by Quota only)

In that part of Ontario lying south of the northernmost line of the C.N.R. and north of the French and Mattawa Rivers and Lake Nipissing and including the District of Manitoulin.

3. November 1, 1960 to March 31, 1961. (by Quota Only)

In that part of the province lying south of the French and Mattawa Rivers.

FISHER AND MARTEN

1. October 15, 1960 to February 28, 1961. (by Quota Only)

In that part of Ontario lying north of the northernmost line of the C.N.R.

2. October 15, 1960 to January 21, 1961. (by Quota Only)

In that part of Ontario lying south of the northernmost line of the C.N.R. and north of the French and Mattawa Rivers and Lake Nipissing and including the District of Manitoulin.

3. November 1, 1960 to January 21, 1961. (by Quota Only)

In that part of the province lying south of the French and Mattawa Rivers.

FOX

1. November 1, 1960 to October 31, 1961.

In all parts of Ontario.

LYNX

1. November 1, 1960 to February 28, 1961. (by Quota Only)

In all parts of Ontario.

MINK

1. October 15, 1960 to February 28, 1961.

In that part of Ontario lying north of the northernmost line of the C.N.R.

2. October 15, 1960 to January 21, 1961.

In that part of Ontario lying south of the northernmost line of the C.N.R. and north of the French and Mattawa Rivers and Lake Nipissing and including the District of Manitoulin.

3. November 1, 1960 to February 28, 1961.

In the Lake Erie District.

4. November 1, 1960 to January 21, 1961.

In the remainder of Ontario.

MUSKRAT

1. October 15, 1960 to May 31, 1961.

In that part of Ontario lying north of the northernmost line of the C.N.R.

2. October 15, 1960 to May 21, 1961.

In that part of the Province lying south of the northernmost line of the C.N.R. and north and west of the French and Mattawa Rivers and Lake Nipissing and including the District of Manitoulin.

3. November 1, 1960 to April 30, 1961.

In that part of the Province lying south of the French and Mattawa Rivers and Lake Nipissing and north of a line commencing at Port Severn in the County of Simcoe and following the north and east boundary of Simcoe County through the Severn River system to Washago and the intersection of the east boundary of Simcoe County with the north boundary of Ontario County, thence easterly and southerly following the north and east boundaries of Ontario County to the intersection of the east boundary of Ontario County with the centre line of Highway No. 7, thence easterly following the centre line of Highway No. 7 to its intersection with the centre line of Highway No. 15 at Perth in the County of Lanark, thence northerly following the centre line of Highway No. 15 to its intersection with the centre line of Highway No. 29 at Carleton Place in the County of Lanark, thence northerly following the centre line of Highway No. 29 to its intersection with the boundary between the County of Carleton and the County of Lanark, thence northerly and easterly following the east boundary of the County of Lanark and the south boundary of the County of Renfrew to the interprovincial boundary.

4. November 1, 1960 to April 15, 1961.

Lake Erie and Lake Huron Districts.

5. November 1, 1960 to April 20, 1961.

The remainder of the Province.

OTTER

1. October 15, 1960 to March 31, 1961.

In that part of Ontario lying north of the French and Mattawa Rivers and Lake Nipissing and including the District of Manitoulin.

2. November 1, 1960 to March 31, 1961.

(a) In that part of the Province lying south of the French and Mattawa Rivers and Lake Nipissing and north of a line commencing at Port

Severn in the County of Simcoe and following the north and east boundary of Simcoe through the Severn River system to Washago and the intersection of the east boundary of Simcoe County with the north boundary of Ontario County, thence easterly and southerly following the north and east boundaries of Ontario County to the intersection of the east boundary of Ontario County with the centre line of Highway No. 7 to its intersection with the centre line of Highway No. 15 at Perth in the County of Lanark thence northerly following the centre line of Highway No. 15 to its intersection with the centre line of Highway No. 29 at Carleton Place in the County of Lanark, thence northerly following the centre line of Highway No. 29 to its intersection with the boundary between the County of Carleton and the County of Lanark, thence northerly and easterly, following the east boundary of the County of Lanark and the south boundary of the County of Renfrew to the interprovincial boundary.

(b) The counties of Carleton, Dundas, Durham, Glengarry, Grenville, Leeds, Northumberland, Prescott, Prince Edward, Russell and Stormont;

(c) Those parts of the counties of Frontenac, Hastings, Lennox and Addington, Peterborough and Victoria lying south of Highway No. 7;

(d) That part of the County of Lanark lying south and east of Highways No. 7, No. 15 and No. 29 and

(e) The townships of Albemarle, Amabel, Eastnor, Lindsay and St. Edmunds in the County of Bruce.

3. There is no open season in the remainder of the Province as follows:

(a) The counties of Brant, Dufferin, Elgin, Essex, Grey, Haldimand, Halton, Huron, Kent, Lambton, Lincoln, Middlesex, Norfolk, Ontario, Oxford, Peel, Perth, Simcoe, Waterloo, Welland, Wellington, Wentworth and York; and

(b) The townships of Arran, Brant, Bruce, Carrick, Culross, Elderslie, Greenock, Huron, Kincardine, Kinloss and Saugeen in the County of Bruce.

RACCOON

1. November 1, 1960 to October 31, 1961.

All parts of Ontario.

GAME AND FUR MANAGEMENT

YEAR 1960

THE 1960 DEER HUNT IN ONTARIO

Two factors affected hunting in Ontario in 1960. Most important was the series of severe winters in central Ontario which caused heavy losses of deer and reduced the numbers available to hunters. More wide-spread but less severe in effect was the poor hunting weather which reduced success somewhat across most of the Province. A total of 31,527 hunters checked by Fish and Wildlife Staffs of the Ontario Department of Lands and Forests reported shooting 6,502 deer in 132,874 hunting days for an overall hunter success of 20.6% and 20.4 days per deer shot. The hunter success was down slightly from the 23.7% reported in 1959 and the days required to shoot a deer rose from the 16.3 reported in 1959.

Northwestern Ontario was fortunate in having another mild winter in 1959-60. As a result, the high success rate that has been normal there in recent years was maintained. Kenora recorded a hunter success of 52.6% and Fort Frances reported 46.3% successful. The age distribution in these districts is difficult to interpret but it seemed similar to the results for the last several years indicating no marked change.

The picture was quite the opposite in north-central Ontario. In Sault Ste. Marie District, three of the past five winters have been severe. The results of the losses sustained showed up plainly in the figures from the hunt where 42.4 hunter days were required to obtain a deer. Although it was not possible to check many deer, those which were aged showed the effects of the severe 1958-59 winter with a shortage of both yearlings and two-and-one-half year old deer. This shortage first showed up in the 1959 hunt in deer which were then fawns and yearlings. Fortunately, the mild winter of 1959-60 in the Sault District gave the deer a good chance to recover. This was indicated by the high percentage of fawns, 43.0%, which was the highest in Ontario and promises a swift recovery of the herd if they are favoured with a few more mild winters.

In Sudbury District not only was 1958-59 a winter of deep snow, but also the 1959-60 winter. The hunting success on the mainland was only 14.4%. Fawns were slightly down at 24.6% but yearlings were much lower than usual at 25.0%. The fact that the 1958-59 winter was the harder of the two is reflected in the even lower percentage of two year olds, 16.2%. These would have been fawns in the winter of 1958-59 and, therefore, harder hit than older deer.

The Manitoulin Island hunter success was down slightly from 28.5% in 1959 to 25.4% in 1960. Since the age composition of the herd has been almost identical over the past few years with good numbers of fawns and yearlings, it is probable that the reduced hunter success was due to poor hunting weather.

In North Bay District hunter success was even lower than in Sudbury District at 7.0%. Again two severe winters had reduced the herd but in this case the 1959-60 winter was revealed as the harder by our snow depth stations and the effect is shown as a shortage of yearlings, 13.8%, in the 1960 hunt.

Parry Sound and Pembroke are on the edge of this winter loss area and may have been affected to some degrees. Hunter success is down from 28.9% to 23.4% in Parry Sound and from 29.5% to 22.6% in Pembroke District. In both districts the percentage of yearlings is lower than usual, 28.6% and 25.1% respectively, and two year olds are scarce, 21.6% in Parry Sound and 15.1% in Pembroke. Unfavourable hunting weather was also a factor in reducing the hunter success in these districts.

In Lindsay and Tweed Districts hunter success has remained at 24.1% and 23.4%, similar to 1959. Yet even here two year old deer were scarce indicating the likelihood of some losses during the winter of 1958-59. Hunting weather was a little better than in the more northern districts.

The southern Districts of Lake Huron and Lake Simcoe showed an increase in hunter success from 16.8% to 17.7% and from 22.9% to 31.7% respectively. No shortages are indicated in the Lake Huron deer but two year olds are low in Lake Simcoe. Since only 39 deer were aged in the latter case, it is doubtful whether the figures present a true picture of the deer herd.

Weather conditions during the hunt were slightly unfavourable.

Kemptville District also escaped the severe winters. Although hunting weather was rather unfavourable, success remained at 40.5%. No shortages were observed in deer age classes. Fawns made up 35.3% of the deer checked while yearlings made up 38.3% of the deer aged, by far the best percentages of young animals in southern Ontario.

From these figures, which are summarized in Tables No. 1 and No. 2, it is obvious that differences in hunting success across Ontario were mostly due to differences in the severity of preceding winters. Where winters were mild hunter success stayed high. Where snow depths were great, hunter success dropped. Poor weather during the hunt had an overall depressing influence on hunter success and accentuated the effects of deer shortages, but deep snow was the major factor reducing deer numbers. A few mild winters should soon restore the diminished herds to their previous levels of abundance.

TABLE No. 1 1960 HUNTER SUCCESS

	Lindsay	Tweed	Kemptville	Pembroke	Perry Sound	North Bay	Sudbury	Manitowlin	Sault Ste. Marie	Lake Huron	Lake Simcoe	Kenora	Fort Frances
Residents													
Organized Camps	2371	3065	1536	1179	5105	1251	825	707	304				
% Hunter Success	32.3	27.8	40.5	26.6	29.8	8.6	16.8	28.9	34.2				
Days/Hunter/Deer	16.3	20.8	14.5	21.1	18.2	40.6	40.0	17.6	17.4				
Casual Hunters	1398	1092		438	2297	903	400	2120	3866				
% Hunter Success	10.0	9.6		11.9	7.8	4.0	9.5	23.5	1.6				
Days/Hunter/Deer	29.2	30.9		32.9	36.7	63.1	20.9	14.9	85.8				
Non-Residents													
Organized Camps	↑	99		↑	233	87	43	152	↑			→	
% Hunter Success		39.4			39.1	14.9	11.6	35.5					
Days/Hunter/Deer	Non-Res. incl.	15.7		Non-Res. incl.	14.8	27.1	40.9	14.1	Non-Res. incl.				
Casual Hunters	11				35	14		18				114	
% Hunter Success		0			28.6	7.1		27.8				52.6	
Days/Hunter/Deer	→	0	→	→	20.0	192	→	15.6	→	→	→	10.5	→
Total Hunters Checked	3769	4267	1536	1617	7670	2255	1268	2997	4170	1176	284	114	404
% Hunter Success	24.1	23.4	40.5	22.6	23.4	7.0	14.4	25.4	2.6	17.7	31.7	52.6	46.3
Days/Hunter/Deer	18.3	21.7	14.5	22.8	19.9	48.1	36.1	15.6	42.4	22.7	7.7	10.5	13.1

TABLE No. 2 1960 DEER AGE DISTRIBUTION BY PERCENTAGE

Age	Lindsay	Tweed	Kemptville	Pembroke	Parry Sound	North Bay	Sudbury	Manitowlin	Sault Ste. Marie	Lake Huron	Lake Simcoe	Kenora	Fort Frances	Stoux Lookout
1½	33.5	39.5	38.3	25.1	28.6	13.8	25.0	36.1	16.3	32.7	23.1	38.3	38.1	45.1
2½	17.9	16.4	18.8	15.1	21.6	23.8	16.2	21.2	16.3	21.3	10.3	26.3	15.5	9.7
3½	22.6	23.1	15.0	28.4	25.7	28.2	32.4	16.4	30.6	20.5	41.0	17.7	29.9	25.8
4½	12.7	11.7	12.8	17.7	13.4	21.5	17.6	12.4	18.4	13.9	12.8	6.4	10.3	6.4
5½	6.3	4.9	10.7	7.7	6.6	10.5	4.4	7.6	14.3	4.9	5.1	7.1	3.1	9.7
6½	3.8	2.9	2.6	5.0	3.5	2.3	2.9	2.7	-	3.3	5.1	2.8	1.0	3.2
7½	3.2	1.5	1.8	1.0	0.7	-	1.5	3.6	4.1	3.3	2.6	1.4	2.1	-
Total Adults	496	549	392	299	1159	181	68	330	49	122	39	141	97	31
Total Fawns	240	292	223	137	492	38	45	223	37	77	24	61	36	22
Total Unaged	162	151	23	33	178	64	70	208	-	-	27	95	54	13
Grand Total	898	992	638	469	1829	283	183	761	86	199	90	297	187	66
% Bucks	36.6	38.3	32.3	34.8	39.0	42.8	35.5	37.6	31.4	35.2	40.0	34.3	51.9	37.9
% Does	36.6	32.3	32.4	36.0	34.1	34.6	38.9	33.1	25.6	26.1	33.3	45.1	28.7	28.8
% Fawns	26.7	29.4	35.3	29.2	26.9	22.6	24.6	29.3	43.0	38.7	26.7	20.5	19.3	33.3

1960 Moose Hunt In Ontario.

A record harvest of 12,000 moose was taken by some 36,000 hunters in Ontario in 1960. Despite the fact that it was the biggest moose season ever held in Ontario with increased numbers of hunters, more moose killed, and a higher percentage of successful hunters, there is little reason for feeling satisfied. With a provincial inventory of over 125,000 moose, we should triple this year's take if we are to make full use of this natural resource. If every hunter who bought a licence this year has been able to shoot a moose, instead of the usual one in three, we would be cropping our moose herd at just about the proper level.

The main reason for not having a higher kill of moose, is lack of access. Despite the large-scale road building programs of recent years, many sections of Ontario remain inaccessible except by air. With most hunters forced to congregate along existing road systems, the fun of hunting may be lost in the crowd, while animals a few miles distant are undisturbed by the hunters. Our aim over the next few years must be to get more roads open to hunters and relax the restrictions on air travel. In this way any congestion among hunters will be relieved and moose herds will be provided for public use which are now living and dying with no benefit to anyone.

Since the moose season was reopened in 1951, the sale of licences has increased annually. Table No. 1 shows the increasing sale of moose licences over the past six years. Non-resident licence sales, comprising about 9 - 11% of the total licences sold, have increased at almost exactly the same rate as resident licence sales. The sale of \$26.00 moose-deer licences, available once more this year south of the French and Mattawa rivers, also increased over the numbers sold in 1956 and 1958.

Table No. 1

	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>
Residents	8958	13440	17369	22688	26349	30340
Non-residents	1141	1550	1893	2362	3431	4212
Moose-deer	<u>0</u>	<u>900</u>	<u>38</u>	<u>1245</u>	<u>0</u>	<u>1608</u>
Totals	10099	15890	19262	26295	29780	36160

The figures for resident hunters obtained by the Fish and Wildlife staff

in each District are summarized in Table No. 2. The calculations indicate that 28,644 resident hunters shot 8,730 moose in northern Ontario for a hunter success of 30.5% in 1960. In the 1959 hunting season, there were only 24,481 hunters who shot 6,949 moose for a hunter success of 28.4%. Thus, number of hunters, numbers of moose, and percent success increased. The largest number of resident hunters was in Geraldton District where 3087 hunters shot 1136 moose. The highest resident hunter success was the 60.5% in Kenora District. Hunter success increased or remained nearly constant in all Districts except North Bay, Sudbury, Fort Frances, and Sioux Lookout.

In southern Ontario, 1500 hunters shot 711 moose in 1960, compared with 1200 hunters who shot 565 moose in the last season in 1958. Hunter success figures are not reliable for southern Ontario because the licences are often used as camp licences and many more potential hunters are in the woods than the licence returns indicate. The reported hunter success has remained at about 47% for the last two seasons after a reported success of 42% in 1956. This fact along with the increasing kill leads us to believe that the moose are well able to support this kind of hunting and may be able to withstand a season every year. The biggest share of the southern Ontario moose hunt fell to Parry Sound District which catered to 60% of the hunters and supplied about 56% of the moose which were shot.

The non-resident hunters were more numerous than ever in 1960, as can be seen in Table No. 3. An estimated 3,963 hunters shot 2,617 moose for a hunter success of 66.1% in 1960. In 1959, there were only 3,233 hunters to shoot 1,976 moose for a hunter success of 61.1%. The highest number of non-resident hunters hunted in Kenora District, where 974 hunters shot 712 moose. The highest non-resident success was the 80.5% in Geraldton District. As usual the non-resident success averaged over twice that of resident hunters, the non-residents having 66.1% success compared with 30.5% for residents.

The sex and age ratios of the moose shot by hunters in the 1960 hunting season are shown in Table No. 4. Since moose are known to have a sex ratio close to 50:50 with only a few more bulls than cows under normal

conditions, the high percentage of bulls reported by both resident and non-resident hunters in northern Ontario indicates that many of these hunters prefer to shoot bulls rather than cows. The preference was more pronounced among non-residents; some of whom travel long distances for trophy heads. Non-residents also showed a reluctance to shoot calves. Only about 12% of the moose reported by non-residents were calves, while 17% of the moose shot by residents were calves. In southern Ontario, the calf ratio was about the same as reported by residents in the north, but the sex ratio of the moose shot was quite different. Although more cows were shot than bulls, the difference was not great enough to rule out the possibility of a 50:50 sex ratio. There may have been a shortage of bulls in the south, but it is more likely that the figures merely indicate that hunters in southern Ontario shot the first moose they saw, instead of waiting for bulls like some of the hunters in the north.

The hunter questionnaire system of gathering information about the hunt was continued in 1960. The data for resident hunters presented in this report were calculated from samples of resident hunter returns, the size of the samples varying with the numbers of hunters in the Districts. The figures for non-resident hunters and for resident hunters using the moose-deer licences were estimated from the total returns received. Questions regarding expenditures by hunters were omitted this year to make room for a calendar on which dates of hunting were to be marked. It was hoped by this means to get more accurate information on hunter activity and success. Jaws were collected as usual for age determination, but due to changes in the aging method all returns are not yet complete.

TABLE No. 2: LICENCE DATA FOR RESIDENT HUNTERS 1960

District	Licences Sold	No. Returns Received	Sample		Calculation Ratio	Total Calculated Licences Used	Calculated Kill of Moose	Percent Hunter Success
			Licences Chosen	% Sample Returns Rec'd				
North Bay	2825	1021	855	91.6	3.61	2021	447	22.2
Sudbury	4106	794	790	55.9	9.29	3069	631	20.6
Sault Ste. Marie	3776	1027	755	94.0	5.32	2755	496	18.0
White River	960	560	480	85.4	2.34	1096	396	36.1
Chapleau	695	680	695	97.8	-	1256	355	28.3
Gogama	564	461	564	81.7	1.22	1514	408	26.9
Swastika	2670	869	534	86.7	5.77	2390	507	21.2
Cochrane	3427	893	400	100.0	8.57	2681	771	28.8
Kapuskasing	2448	713	472	69.3	7.49	2753	1022	37.1
Geraldton	1884	797	558	72.9	4.63	3087	1136	36.8
Port Arthur	4000	1871	800	85.6	5.84	2964	948	32.0
Port Frances	925	538	925	57.1	1.72	576	204	35.4
Kenora	1101	434	550	59.5	3.37	1235	747	60.5
Sioux Lookout	958	529	958	55.4	1.81	1247	662	53.0
Toronto	400							
Northern Ontario								
Totals & Averages	7 30739	11187	9336	-	-	28644	8730	30.5

Southern Ontario	Licences Sold	No. Returns Received	Sample		% of Returns Rec'd	Estimated Licences Used	Estimated Moose Killed
			Licences Chosen	% Sample Returns Rec'd			
North Bay	45	30		66.7	20	9	45.0
Parry Sound	883	360		97.4	899	400	44.5 *
Lindsay	321	293		91.3	321	155	48.4 *
Tweed	158	150		94.9	116	52	44.8 *
Pembroke	124	112		90.3	144	95	66.0 *
Southern Ontario							
Totals & Averages	1531	1445			1500	711	47.4 *
Ontario Totals & Averages	32270	12632			30144	9441	31.3

* High percent success due to party method of hunting (see text)

TABLE No. 3: NON-RESIDENT MOOSE LICENCE SALES 1960

	No. Licences		No. Returns		% Returns Received	Bought Elsewhere		Bought Licence in		Estimated Licences Sold	Estimated No. of Moose Killed		% Hunter Success
	Sold	Received	Received	Received		Hunted in District	Hunted Elsewhere	District Hunted	Elsewhere		No	Season	
North Bay	36	29	80.6	36	0	0	36	0	0	0	20	44.4	
Sudbury	42	32	76.2	0	3	3	0	0	45	45	119	38.0	
Sault Ste. Marie	633	572	90.4	323	3	3	323	19	313	313	120	59.1	
White River	206	183	88.8	16	16	16	19	20	203	203	145	51.8	
Chapleau	259	241	93.1	41	41	41	20	0	280	280	90	36.4	
Gogama	128	90	70.3	119	119	119	0	53	247	247	41	65.1	
Swastika	111	80	72.1	5	5	5	35	14	63	63	39	40.2	
Cochrane	107	97	90.7	25	25	25	14	0	97	97	133	71.9	
Kapuskasing	169	126	74.5	30	30	30	188	201	185	185	350	80.5	
Geraldton	261	183	70.1	124	124	124	1	24	435	435	228	72.1	
Port Arthur	452	329	72.8	1	1	1	102	296	265	265	712	73.1	
Kenora	1073	720	67.1	102	102	102	24	24	974	974	620	77.0	
Sioux Lookout	533	431	80.9	296	296	296			805	805			
Totals for Ontario	4010	3113	77.6	765	765	765	913	2617	3963	3963	2617	66.1	

TABLE No. 4: SEX AND AGE CLASSIFICATIONS OF RESIDENT MOOSE KILL 1960

	Adults		Calves		Unspec.	Total Calculated Kill
	♂	♀	♂	♀		
North Bay	155	234	38	20	0	447
Sudbury	334	204	56	37	0	631
Sault Ste. Marie	236	176	56	28	0	496
White River	181	122	45	48	0	396
Chapleau	228	89	21	17	0	355
Gogama	225	132	34	17	0	408
Swastika	227	205	45	30	0	507
Cochrane	398	262	43	68	0	771
Kapuskasing	533	335	62	92	0	1022
Geraldton	484	393	145	114	0	1136
Port Arthur	485	288	99	76	0	948
Fort Frances	108	53	29	14	0	204
Kenora	310	232	102	53	0	747
Sioux Lookout	307	230	91	34	0	662
Totals	4211	3005	866	648	0	8730
Percentage	48.2	34.4	9.9	7.4		
<u>Southern Ontario</u>						Total Reported Kill
North Bay	8	1	0	0	0	9
Parry Sound	138	177	35	37	4	391
Lindsay	61	57	18	10	0	146
Tweed	19	27	4	2	0	52
Pembroke	31	22	7	2	0	62
Totals	257	284	64	51	4	660
Percentage	39.2	43.3	9.8	7.8		
Ontario Totals	4468	3289	930	699	4	9390
Percentage	47.6	35.0	9.9	7.5		

SEX AND AGE CLASSIFICATIONS OF NON-RESIDENT MOOSE KILL 1960

	Adults		Calves		Unspec.	Total Reported Kill	Total Estimated Kill
	♂	♀	♂	♀			
Sudbury	10	2	1	0	0	13	20
Sault Ste. Marie	58	43	3	4	0	108	119
White River	63	37	6	2	0	108	120
Chapleau	90	44	3	4	1	142	145
Gogama	48	24	2	3	0	77	90
Swastika	10	15	0	0	0	25	41
Cochrane	23	13	0	1	0	37	39
Kapuskasing	57	31	7	6	1	102	133
Geraldton	142	82	14	26	0	264	350
Port Arthur	75	67	8	17	16	183	228
Kenora	209	176	38	31	0	454	712
Sioux Lookout	305	182	32	41	2	562	620
Totals	1090	716	114	135	20	2075	2617
Percentage	53.0	34.8	5.5	6.6			

SPRING DEER SURVEY 1960

After the unusually deep snow of 1958-59, counts of dead deer were carried out in many parts of the southern Ontario deer range in an effort to determine the effects of the severe winter on our deer herds. Difficulties were encountered in interpreting the results. We were unable to determine whether or not the mortality observed had any great significance. When a second severe winter was experienced in 1959-60, it was decided that three surveys should be combined in order to obtain more meaningful data. As well as counting dead deer, the pellet groups left by living deer were counted as an index to deer populations, and the food plants present and browsed were determined to bring to light any shortages in food supplies. This report summarizes the results of the 1960 spring deer surveys.

Dead Deer Counts

As in the previous year, dead deer counts were made by three-man crews walking one chain (66 ft.) apart through the woods and, therefore, covering a continuous three chain wide strip. All deer found were described and in many cases the jaw was collected for age determination and the femur for estimating the physical condition of the deer. It was hoped that the deer known to have actually starved could be determined in this way. The results of the dead deer counts are shown in Table No. 1.

From Table No. 1, it will be seen that 216 dead deer were found (cf. 187 in 1959) on 322 miles of cruise line which covered 12.1 square miles of forest (cf. 17.1 sq. mi. in 1959). This is an average of 17.9 dead deer per square mile (cf. 10.9 dead deer per sq. mi. in 1959). Somewhat less cruise line was completed this year because other surveys were combined with the dead deer cruise.

It will be seen that heavy losses were discovered in Sudbury, Pembroke and North Bay Districts. One deer yard in Parry Sound District and one in Lake Simcoe District also showed heavy loss. In the remainder of the Province, losses were medium to light.

Table No. 1. Dead Door Surveys

<u>District and Deer Yard</u>	<u>Size of Yard in sq. mi.</u>	<u>Miles of Cruise Line</u>	<u>% of Yard Searched</u>	<u>No. of Dead Deer Found</u>	<u>Est. loss per sq. mi.</u>	<u>Est. Total Loss</u>
<u>Lake Simcoe</u>						
Wood Twp.	1.0	4.1	15.0	3	19.4	19
<u>Lindsay</u>						
Harburn	5.4 (14.0)	11.4	7.9	2	4.8	26
Haliburton L.	3.8 (6.9)	10.3	9.9	1	2.7	11
Havelock	2.9 (4.7)	3.8	4.9	0	0	0
North Lake	2.2	3.8	6.5	2	14.1	31
Eyre	0.9	2.6	10.8	0	0	0
<u>Tweed</u>						
Norcan Lake	7.0	19.0	10.2	1	1.3	9
Madawaska R.	4.5	7.8	6.5	3	10.1	45
<u>Pembroke</u>						
Aylen Lake	8.8	17.8	7.5	22	33.1	280
Bonnechere	21.8	43.6	7.5	61	37.3	786
Fraser	8.3	16.8	7.5	9	14.4	114
Kiosk	8.8	20.6	8.8	9	11.7	97
<u>Parry Sound</u>						
Shawanaga	4.2	10.9	9.7	6	14.7	62
McConkey	6.3	12.9	7.7	6	12.5	79
Squaw Lake	12.5	21.1	6.3	12	15.2	190
Ferrie	1.0	4.0	15.0	4	26.7	27
Stisted Twp.	4.4	9.5	8.1	0	0	0
<u>North Bay</u>						
Bastedo	3.2 (7.0)	26.7	31.3	1	1.1	3
Bertram	2.0 (5.2)	17.3	32.4	14	21.6	43
Mattawan	4.1 (13.6)	31.0	28.4	3	2.7	11
Temagami	3.4 (17.2)	23.0	25.4	17	19.7	67
<u>Sudbury</u>						
Massey	<u>1.3</u> (42.0)	<u>13.0</u>	37.5	<u>38</u>	77.9	101
<u>Totals</u> 117.9	322.1		214		

NOTE: In cases where only part of a yard was selected for study, the area of the whole yard is included in brackets. All other figures apply only to the section studied.

Table No. 2 shows the age composition of the deer found. It will be noted that this table includes deer not actually within the three chain boundaries of the survey line.

Table No. 2

Age Composition of Dead Deer Found Spring 1960

	<u>Bucks</u>	<u>Does</u>	<u>Sex Unknown</u>	<u>Total</u>	<u>%</u>
9 months	29	22	34	85	56.7
1 year 9 months	3	3	3	9	6.0
2 years 9 months	7	6	4	17	11.3
3 years 9 months	10	2	3	15	10.0
4 years 9 months	4	3	2	9	6.0
5 years 9 months	2	4	2	8	5.3
6 years 9 months	3	3	0	6	4.0
7 years 9 months or over	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>0.7</u>
Total	58	44	48	150	100.0
Adults			4	4	
Unknown age	<u>3</u>	<u>6</u>	<u>—</u>	<u>9</u>	
Total aged or sexed	61	50	52	163	
Unknown age or sex				<u>70</u>	
Grand Total				<u>233*</u>	

* Includes 19 dead deer which were off the survey line.

As in 1959, a very high percentage of fawns was found in the winter mortality. The figure shown is somewhat higher than the actual proportion of dead fawns because of the fact that they are easier to identify than older age classes. However, even considered as a percentage of the total number of dead deer, fawns still constitute 36.5% of the total mortality. The sex ratio indicated is quite similar to that usually found among deer in Ontario, indicating no differential sex mortality. Of 185 deer for which cause of death could be tentatively determined 57 or 30.8% were believed to have died of starvation. However, so many deer were in a condition such that cause of death could not be determined, that the above figure is not very useful. In Pembroke District where deer were severely affected by both winters, the total mortality seemed to be up slightly over the previous year but the percentage of deer starved dropped from 60% to 40%. This percentage of deer starved varied from one yard to the next with the yards showing high percentages for 1959 dropping lower in 1960 and vice versa.

It would appear that starvation losses the first year reduced deer numbers enough so that shortage of food was not as important a factor in 1959-60. Although good figures on percentages of deer starved are very desirable, so many carcasses are decayed and torn apart by scavengers that it is very difficult to get accurate figures. Another way of assessing the effects of the winter is by comparing the mortality found with the estimated deer population as determined by pellet group counts.

Pellet Group Counts

In an effort to obtain estimates of the numbers of deer wintering in the different yards, pellet groups were counted on plots along the cruise lines. The size and distribution of the plots was determined by the browse survey which was carried out simultaneously. Plots were one chain long by 6.6 ft. wide (1/100 acre) with five chains between plot centres. Some districts in which there was no problem of winter losses carried out the pellet group counts and browse surveys only, while other districts did only the dead deer counts in some yards. Results of the pellet group counts are shown in Table No. 3.

Column 4 in Table No. 3 was obtained by the following formula

$$\frac{\text{Total Crotisings} \times 100 \times 640}{\text{Total Plots} \times 12.7}$$

where the 100 changes mean count to crotisings per acre and the 640 changes it to square miles. The 12.7 is the average number of crotisings per day, determined from captive deer in Michigan. Column 5 is obtained by dividing Column 4 by the average number of winter days, 195. Column 6 is obtained by multiplying Columns 1 and 5.

Of these calculated columns, Column 4 is the most reliable. Due to deer movements, the length of time in a yard may differ considerably from the 195 days. Also, it is difficult to determine how much area should be used in calculating Column 6 because of decreasing deer densities toward the outside of each yard. These questions may be answered by careful observation of the deer in future. For now, Columns 5 and 6 must be considered with reservations. It will be seen from Column 4 that the highest concentrations of deer were in two Parry Sound District yards, Ferrie and Shawanaga. The next highest were in the Massey yard, of Sudbury District and the Bertram yard of North Bay District.

Table No. 3. Pellet Group Counts

<u>District and Deer Yard</u>	<u>Size of Yard</u>	<u>No. Plots Sampled</u>	<u>Total Winter Crotisings</u>	<u>Calculated Deer Days per sq.mi.</u>	<u>Calculated Deer per sq.mi.</u>	<u>Calculated Total No. Deer</u>
<u>Lake Huron</u>						
Willow Creek	17.0sq.mi.	280	449	8063	41.3	702
Barney Lake	10.0	205	53	1310	6.7	67
Miller Lake	15.2	189	97	2570	13.2	201
<u>Lake Simcoe</u>						
Wood Twp.	1.0	65	243	18847	96.7	97
<u>Lindsay</u>						
Eyro	0.3	34	13	1915	9.8	3
Havclock	2.1	69	19	1411	7.2	15
North Lake	0.3	59	66	5644	28.9	9
Haliburton Lake	2.7	130	136	5291	27.1	73
Harburn Twp.	5.8	138	115	4183	21.5	125
<u>Tweed</u>						
Madawaska R.	4.5	125	218	8768	45.0	202
<u>Kemptville</u>						
Maberly	0.47	64	87	6854	39.1	18
<u>Pembroke</u>						
Kiosk	8.8	193	516	13455	69.0	607
Bonnechere	47.0	440	1382	15824	81.1	3812
<u>Parry Sound</u>						
Shawanaga	4.2	109	500	23131	118.6	500
McConkey	6.3	188	487	13052	66.9	421
Squaw Lake	12.5	338	336	7408	38.0	475
Ferrie	1.0	64	621	48905	251.8	251
Stisted Twp.	4.4	153	258	8517	43.6	192
<u>North Bay</u>						
Bastedo	4.1	192	32	857	4.4	18
Bertram	3.2	170	738	21871	112.2	359
<u>Sudbury</u>						
Massey	1.3	204	905	22173	113.7	148
<u>Sault Ste. Marie</u>						
Tupper & Haviland	0.6	144	419	14665	75.2	45
Aberdeen	0.2	72	129	9020	46.3	9

Browse Surveys

Browse surveys were carried out according to the method developed by Passmore and Hepburn, 1955 (see Ont. Dept. of Lands and Forests, Research Report No. 29). In most cases the original method was changed slightly in the interest of simplicity for extensive use. Rather than estimating the percentage of twigs browsed from each stem, the stem was merely recorded as browsed or unbrowsed. Plots were the same as in the original method, one chain long by two feet wide with five chains between plot centres. The results of this survey are summarized in Table No. 4.

Table No. 4. Browse Survey

District and Deer Yard	Size of Yard	No. Plots Sampled	Living Stems per acre	No. Browsed Stems per acre	% Stems Browsed	% Stems Mut.
<u>Lake Huron</u>						
Willow Cr. -						
Johnston Hrbr.	17.0 sq. mi.	280	11504	-	18.0**	13.0
Barney Lake	10.0	205	9314	-	9.6**	8.0
Miller Lake	15.0	189	9403	-	7.6**	7.8
<u>Lake Simcoe</u>						
Wood Twp.	1.0	65	1741	665	38.2	49.9
<u>Lindsay</u>						
Harburn	5.8	138	5863	1167	19.9	10.4
Haliburton	2.7	130	5351	934	17.5	1.9
Eyre	0.3	34	5581	320	5.8	5.8
Havelock	2.1	69	6337	923	14.6	0.7
North Lake	0.3	59	8809	755	8.6	0.9
<u>Tweed</u>						
Madawaska R.	4.5	125	8175	3002	36.7	7.2
<u>Pembroke</u>						
Kiosk	8.8	193	3750	1862	49.4	4.4
Bonnechere	4.7	440	7700	4332	54.9	11.3
<u>Parry Sound</u>						
Shawanaga	4.2	109	4029	2210*	54.8	11.9
McConkey Twp.	6.3	188	2803	1149	41.0	9.5
Squaw Lake	12.5	228	2710	1087	40.1	5.2
Ferrie Twp.	1.0	64	5059	1564	30.9	5.4
Stisted Twp.	4.4	153	2537	1068	42.1	Trace
<u>North Bay</u>						
Bastedo	4.1	192	5160	433	8.4	1.2
Bertram	3.2	170	3979	2192	55.1	1.4
<u>Sudbury</u>						
Massey	1.3	154	6818	3636	53.3	Heavy
<u>Sault Ste. Marie</u>						
Tupper & Haviland	375 acres	144	7615	2062	27.1	-
Aberdeen	105 "	72	7604	3305	43.5	-

* Browsed stems that were also mutilated were not included in the browsed category. Therefore, figure is low.

** Browsed twigs counted rather than just stems. Not comparable with other figures.

In Table No. 4 the percent of stems killed by browsing was not included as it was in all cases very low. The two highest figures were for the McConkey Twp. yard in Parry Sound District and for the Bonnechere yard in Pembroke District, both at 13%. Column 3 was obtained by dividing the total living stems by the number of plots and multiplying by 330 to change it to acres. Column 4 was obtained in the same way using the total number of browsed stems. Columns 5 and 6 were obtained by dividing the number of browsed or mutilated stems by the total number of living stems and multiplying by 100.

The number of stems available to deer was highest in Willow Cr. - Johnston Hrbr., Miller Lake, Barney Lake, North Lake and Madawaska yards. The most heavily utilized deer yards in terms of browsed stems per acre were Bonnechere, Massey, Aberdeen, Madawaska and Shawanaga. The percent of stems browsed was highest in Bertram, Bonnechere, Shawanaga, Massey and Kiosk. The percent of stems mutilated was of little value in all cases except the Woods Twp. yard in which it probably has a definite bearing on the relatively low percent of stems browsed. The past browsing had so mutilated the trees as to leave nothing for present browsing on many of them.

The contribution of various food species to the sustenance of deer in southern Ontario is demonstrated by Table No. 5.

Table No. 5. Importance of Food Species

Species	No. of Deer Yards in which Species Rank Among First Four in Utilization				Total
	1st	2nd	3rd	4th	
White Cedar		2	1		3
Dogwood	4		1		5
Hazel	5	3	4	4	16
Mt. Maple	1	7	3	4	11
Juneberry			2		2
Hard Maple	6	4	1	4	15
Red Maple	4	3	2	3	12
Balsam		1	3	3	7
Aspen			1	1	2
Willow				2	2
Hemlock			1		1
Striped Maple	1	1	3	1	6
White Birch			1	1	2
Yellow Birch				2	2
Red Pine				1	1
Ground Juniper				1	1
Pincherry	1				1
Red Oak				1	1
Balsam Poplar				1	1

Perhaps the most striking feature of Table No. 5 is the relatively small importance of white cedar. It may be that this is largely due to the elimination of most cedar browse within reach of the deer by former utilization. At any rate, hazel, hard maple, red maple, and mountain maple seem to be of most widespread importance. Although fairly restricted in range, dogwood is usually very important where it does occur. It must be remembered that these figures are for the most part based on numbers of stems browsed. Species such as hazel are probably not quite as important as they appear, while species like balsam would contribute more food than indicated.

Combined Surveys

The results of the dead deer survey and pellet group counts are combined in Table No. 6.

Table No. 6 Combination of Dead Deer and Pellet Group Surveys

<u>District and Deer Yard</u>	<u>Living Deer per sq. mi.</u>	<u>Dead Deer per sq. mi.</u>	<u>Percent Mortality</u>
<u>Lake Simcoe</u>			
Wood Twp.	96.7	19.4	20.1
<u>Lindsay</u>			
Harburn	21.5	4.8	22.3
Haliburton	27.1	2.7	10.0
Havelock	7.2	0	0
North Lake	28.9	14.1	48.8
Eyre	9.8	0	0
<u>Tweed</u>			
Madawaska	45.0	10.1	22.4
<u>Pembroke</u>			
Kiosk	69.0	11.7	17.0
Bonnechere	81.1	37.3	46.0
<u>Parry Sound</u>			
Shawanaga	118.6	14.7	12.4
McConkey	66.9	12.5	18.7
Squaw Lake	38.0	15.2	40.0
Ferrie	250.8	26.7	10.7
Stisted	43.6	0	0
<u>North Bay</u>			
Bastedo	4.4	1.1	25.0
Bertram	112.2	21.6	19.3
<u>Sudbury</u>			
Massey	113.7	77.9	68.5

It appears from Table No. 6 that mortality up to about 20% could be considered normal. Mortality from 20% to 40% could be considered extreme. If this is true, the Massey, North Lake, Bonnechere and possibly the Squaw Lake yards suffered extreme mortality last winter. The Bastedo, Madawaska, Harburn and Wood Twp. yards suffered heavy mortality. The remainder of the yards in which the combined survey was done were only lightly affected. Some of these figures could be questioned, for example, the Bastedo yard which is based on finding one deer, but the approach of combining the dead deer survey with the pellet group counts undoubtedly gives much more meaningful figures than either survey would separately.

The influence of browse conditions on mortality is not clearly evident. Since many factors combine to cause mortality, it is difficult to determine the exact influence of any one. There is a tendency toward an inverse relationship between the number of stems available per deer and the percent of mortality that occurred. However, due to the fact that the quality of the food and the effect of snow depths must be considered along with the mere quantity of browse, the assessment of these factors must await a future report.

Significance to Hunters

Although it is always difficult to predict hunting success because of the very important effects of weather during the hunting season, it is possible to draw some conclusions from these surveys. If average weather prevails, most of the deer range south of the French and Mattawa Rivers should experience a normal hunt this fall. The losses of deer in occasional yards may make hunting spotty by causing local shortages but the losses were not heavy enough to have any appreciable effect on the overall hunter success. In Pembroke District losses were high but the heaviest mortality occurred in Algonquin Park. It is expected that the herds throughout the rest of the district will be able to absorb the loss with only a slight reduction in hunter success.

North of the French and Mattawa Rivers conditions are different. Both North Bay and Sudbury Districts experienced such heavy losses that a considerable reduction in hunter success may result. This is particularly true of the northern sections of the districts. The more southern hunting areas will

probably not be affected to as great a degree. Manitoulin Island had a mild winter and should have a normal hunt. Although a comparatively good winter was experienced in Sault Ste. Marie District in 1959-60, the deer herd there was so reduced in past years, particularly by the severe winter of 1958-59, that hunting will remain at the low level of success that was seen last fall. The effects of the winter will also show up in the age composition of the deer shot. Yearlings and possibly fawns will be scarce in the North Bay and Sudbury Districts, while two year old deer will be missing in the Sault Ste. Marie District.

Despite these observations, weather remains the single most important factor in determining hunter success. If there is snow on the ground, hunter success will be high. If the weather is rainy, hunter success will be low. The suitability of hunting weather can sometimes entirely mask any changes in deer availability due to the preceeding winter.

ONTARIO RUFFED GROUSE STUDIES 1960

During the summer of 1960 District staffs again counted the number of young in ruffed grouse broods. A total of 941 were checked in fifteen Districts. In 1959, 576 broods were counted; the increase in 1960 is not due to an improvement in the ruffed grouse population but is because more Districts participated in the survey.

Table No. 1 summarizes the brood count by District. Average brood sizes for 1959 and 1958, where available, are given for comparison. 59 broods counted in September are not included because many broods begin to disperse at this time and counts are not a reliable index to survival.

It will be seen that on the whole the survival of young ruffed grouse was not as good in 1960 as it was in 1959. Only two Districts, Lindsay and Sioux Lookout, showed an increase in brood size for each of the three summer months.

Brood counts are not practical in the Erie District and no data is available on survival of young there. Breeding success of ruffed grouse there must have been exceptional in 1960; there were grouse in many woodlots which normally do not hold them and reports were received of hunters who flushed 40 to 60 birds on a day's hunt. The number of grouse seen per 100 hours in Erie District for a small sample of grouse hunters was the highest in the Province in 1960.

Hunters again co-operated in supplying field staff with wings and tails of grouse shot for age and sex studies. A total of 5529 were received compared with 4299 collected in 1959. In most Districts the ratio of juvenals to adult females in the bag was lower than that recorded in 1959 and reflected poorer survival. In Tweed, Parry Sound, and White River, however, there was an improvement in the ratio although in the latter two Districts it cannot be said that the ratio was high.

In 1960 data on the quality of grouse hunting on foot in the bush was kept separate from that collected from hunters who drive bush roads and stop to shoot birds that are seen.

The results which are not strictly comparable with previous years are presented in Table No. 3 and No. 4. A total of 676 hunters who operated on foot in the bush and 385 who hunted roads supplied information on their hunt.

BRUFFED GROUSE BROOD COUNTS: COMPARISON OF YEARS.

	June			July			August		
	Number Counted 1960	Average Size		Number Counted 1960	Average Size		Number Counted 1960	Average Size	
		1960	1958		1960	1958		1960	1958
Lindsay	22	6.9	5.5	29	6.9	5.8	23	6.5	6.4
Tweed	29	7.2	7.2	30	5.5	6.7	2	7.5	—
Pembroke	9	6.6	6.0	21	6.1	7.0	2	5.0	—
Parry Sound	60	5.8	6.1	79	5.5	5.8	39	4.2	4.5
North Bay				55	6.4	7.1			
Sudbury	11	9.0	—	44	5.8	—	21	5.3	—
Sault Ste. Marie	21	5.4	—	22	4.9	—	9	5.0	—
White River	11	5.5	7.3	73	4.8	5.6	26	4.2	4.8
Chapleau	10	5.3	—	27	4.9	—	40	4.9	—
Kenogama	3	3.0	6.1	24	5.6	4.7	8	4.0	4.3
Seraldton	5	7.4	—	20	6.0	—	7	4.6	—
Port Arthur	—	—	—	36	5.3	—	2	4.5	—
Sioux Lookout	—	—	4.0	12	5.3	7.3	11	3.7	4.3
Kenora	4	6.3	—	13	5.3	6.1	1	2.0	—
Fort Frances	12	7.5	6.0	9	7.6	5.2	—	—	8.0

SEX AND AGE OF RUFFED GROUSE IN HUNTERS BAGS 1960

	Sample Size	Adults		Juvenals		Ratios	
		♂	♀	♂	♀	1960	Juv : Ad ♀ 1959 1958
Lindsay	660	87(15)*110		197(26)*225		4.1:1	7.5 —
Tweed	214	26(2)*16		62(22)*86		10.6:1	8.5 —
Kemptville	149	22	16	60	51	6.9:1	15.2 —
Pembroke	380	39	34	158	149	6.1:1	— —
Parry Sound	443	87(8)* 47		161(8)* 131		6.4:1	4.1 3.6
North Bay	685	144	114	175	252	3.7:1	8.2 3.7
Sudbury	595	95	75	212	213	5.7:1	5.8 —
Sault Ste. Marie	329	78	62	88	101	3.0:1	7.8 —
White River	251	66	33	60	92	4.6:1	3.9 1.8
Chapleau	161	37	24	42(13)* 45		4.1:1	10.6 2.1
Gogama	361	75	45	120	121	5.4:1	6.6 5.5
Swastika	28	2	5	9	12	4.2:1	6.4 5.1
Geraldton	161	33(1)* 26		46(18)* 37		3.9:1	10.0 —
Port Arthur	468*	(155)*		(313)*		—	9.4 —
Kenora	457	90	58	149	160	5.3:1	9.1 5.6
Sioux Lookout	187	15(1)* 15		70(18)* 68		10.0:1	16.7 3.9

* Unsexed.

Table No. 3

RUFFED GROUSE HUNTERS SUCCESS ON FOOT IN THE BUSH

	<u>Total Hunters</u>	<u>Total Hours</u>	<u>Birds/100 Hours Seen</u>	<u>Birds/100 Hours Shot</u>
Lake Erie	9	411	140	33
Kemptville	20	239	119	40
Pembroke	85	207	130	40
Parry Sound	181	640	82	28
Sault Ste. Marie	111	297	78	14
White River	37	380	46	30
Chapleau	46	117	—	72
Gogama	57	231	58	39
Geraldton	43	124	84	60
Kenora	87	255	100	54

Table No. 4

RUFFED GROUSE HUNTERS SUCCESS ON ROADS

	<u>Total Hunters</u>	<u>Total Miles Driven</u>	<u>Miles per Bird Seen</u>	<u>Miles per Bird Shot</u>
Pembroke	69	1587	—	11.0
Parry Sound	101	1125	7.7	15.0
Sault Ste. Marie	29	1771	28.5	42.1
White River	39	611	10.1	16.1
Chapleau	81	5381	—	30.4
Geraldton	66	1348	15.0	20.0

PELEE ISLAND PHEASANT SHOOT 1959

Statistics Based on Hunter Questionnaire

Sample Size 8%

Season - October 28 and 29

Bag Limit - 8 cocks, 2 hens

Licences sold -	-	Non-resident	937	
		Complimentary & Resident	200	
	Total	- - - - -	-	1137
Total Cocks bagged				6322
	Per Hunter		5.56	
Total Hens bagged				2028
	Per Hunter		1.88	
Total Birds bagged				8350
	Per Hunter		7.44	
No. of hunters with full quota		352	=	31%
No. of hunters with quota of cocks		405	=	35.6%
No. of hunters with quota of hens		1030	=	90.6%
No. of hunters who hunted 1st day only		188	=	16.5%
No. of hunters who hunted both days		949	=	83.5%

Hunter Success

Hunters who hunted first day only		Hunters who shot limit of cocks	
cocks bagged per hunter	- 7.8	(1st day only)	
hours per hunter	- 5.9	cocks per hunter	- 8.0
cocks per hunter hour	- 1.25	hours per hunter	- 6.1
		cocks per hunter hour	- 1.2
Average number of hours in the field per hunter	- 10.1		
(All hunters all season)			
Total birds bagged per hunter	- 7.44		
(All hunters all season)			
Birds per hunter hour	- 0.74		
(All hunters all season)			

The July Estimate vs. the October Estimates

(Based on Questionnaires)

Cocks

Total Bag	- 6322
Less imports (Est. 90% survival	- 900
Bag of native cocks	<u>5422</u>
Plus loss and illegal kill (15%) (Native cocks only)	813
Total kill - native cocks	<u>6235</u>
Plus Stock (Est)	
Contributed by native birds only	<u>625</u>
Total cock Population (Oct. 1959)	6860
Estimate of Population in Oct. (July Survey)	8004
Difference	<u>-1144 (-14.3%)</u>

The estimate in July is 14.3% higher than the population indicated by hunting statistics. Factors contributing to the error could be,

1. a high estimate in July,
2. higher than average mortality from July to the hunt,
3. a higher than estimated loss from crippling and illegal kill,
4. inaccuracies in the questionnaire.

Some of these factors could be working to reduce the population from July to the end of the shoot.

Hens

(Native) surviving to October	14537
(July Estimate)	
Less bag	<u>2028</u>
	12509
Less loss and illegal kill (Est)	<u>2028</u>
Post shoot population (based on July estimate)	10481

Since the July estimate for cocks was 14.3% higher than the population indicated at the shoot, the population of hens after the shoot is revised. A reduction of 20% is estimated due to the higher mortality rate of hens.

Revised post shoot estimate

Estimate based on July survey	10481
Less 20% (est)	<u>2096</u>

Final post season estimate 8385

(Assuming that the mortality of hens would be higher than cocks from July to the shoot and that the crippling loss would be greater for hens.)

(based on questionnaires)

Cock:Hen ratio 1: 11.2

Birds hit and not retrieved - both days

Birds seen and not picked up

First Day

Second Day

<u>Total Seen and not picked up</u>	1607
-------------------------------------	------

Cocks	326	
Hens	705	
Totals		1031

Cocks	280	(86% of birds picked up)
Hens	<u>162</u>	(23% " " " " " ")
Totals		<u>442</u>
<u>Not included in the bag</u>		<u>589</u>
(57% of those picked up)		

Not included in the bag (57% of those picked up.	589
Hens picked up and given to Conservation Officers	<u>72</u>
(not seized	
Unaccounted for	517
cocks	46 (14% of those picked up)
hens	<u>543</u> (77% of those picked up)
Not included in bag	589
Less	<u>72</u> (handed in to Conservation Officers)
Net	517 (cocks 46 - hens 471)

The 517 were picked up but not included in the bag and not handed over to Conservation Officers - disposition unknown.

Crippling Loss

Data for 1958 and 1959 compared.

This is presented in an attempt to throw some light on the perennial problem of the crippling loss. The percentage of the bag involved in each category in the years compared, is worthy of note, and certainly indicates that this method of collecting information from hunters has value. If gross errors are present, they are at least constant from year to year. This is supported by other factors - hunting pressure which was constant and weather which has been remarkably good for the past five years.

The percentage of birds reported hit and not retrieved is practically the same as for the total number seen dead in the field. The unknown number here are those cripples showing no evidence of being hit which die later, and the dead birds which are never found.

Hunters find and pick up birds equal to 12% of the total bag. No doubt many more hens would be picked up if hunters were encouraged to do so. The problem is a choice between wasting birds and opening the door to excessive shooting of hens.

Tabulation Data follows:

Crippling Loss Data for 1958 and 1959 Compared

	1958		1959		Difference	
	No. of <u>Birds</u>	% of <u>Bag</u>	No. of <u>Birds</u>	% of <u>Bag</u>	No. of <u>Birds</u>	% of <u>Bag</u>
All hunters both days						
Hit and not retrieved	2584	23	2003	24	-581	-22
Seen dead in the field	2878	25	2638	22	-240	- 8.3
Seen dead & not picked up	1553	14	1607	19	94	6
Seen dead & picked up	1325	12	1031	12	-294	-22
Picked up & included in the bag			442	5.3		
Total bag	11227		8350		-2877	-26
Bag Limit	9C		8C			
	2H		2H			

Statistics Based on Hunter Bag Checks

Sample Size 8.7%

Hunters were contacted prior to boarding the boat to leave the Island, therefore the hunt was complete in all cases.

<u>No. of hunters checked</u>		110
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<u>No. of cocks bagged</u>		
Per hunter	6.24	
Total		7095

<u>No. of Hens bagged</u>		
Per hunter	2.0	
Total		<u>2274</u>

<u>Total birds bagged</u>		
Per hunter	8.24	
Total bag		9369

This data, when compared to that derived from questionnaires, indicates an increase in the kill of cocks of 773 or 12.2% and of hens 246 or 12.0%.

When the bag check data is compared to the population estimate made in July, the results are as follows.

Population Estimates compared

(July estimate vs. hunter bag check estimate)

<u>Cocks</u> (native) alive at the shoot (July est.)	8004
--	------

Plus imports (Est. 90% survival)	<u>900</u>
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Total Cocks before the shoot	8904
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Total bag	7095
-----------	------

Loss and illegal kill	
(15% of bag est.)	1064

Cocks alive after the shoot	<u>750</u>
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Total population (pre shoot)	8909
------------------------------	------

Difference is only 5 birds

<u>Hens</u> alive at the shoot (July est.)	14537
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Total Bag	2274
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Loss and illegal kill (est.)	2274
------------------------------	------

Total kill	<u>4548</u>
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Post Shoot Population	9989
-----------------------	------

For comparison

Post season population (based on questionnaire)	10481
" " " (hunter bag checks)	<u>9989</u>
Difference	492 hens

(-3.4% of July Estimate)

Cock/Hen ratio 1: 13.3

There was no crippling loss data collected on the hunter bag checks.

Statistics based on

1. hunter questionnaires, and
2. hunter bag checks

are presented for comparison. Either method indicates a population at the shoot which is reasonably close to the estimate made at the close of the July survey.

Imported birds

One thousand cocks were released on the Island about mid-October.

One hundred and fifty to two hundred adult cocks were released in the spring.

Number of hunters contacted in the field by Departmental officers was 22% of the total during the two days. Two experienced officers supervised the hunt.

Sources of Error in the questionnaires

One source of error was obvious this year. Ten percent of the hunters reported shooting their quota the first day, and at the same time reported hunting hours on the second day. This shows that the questionnaires were not accurately completed or that the hunter shot for another member of the party on the second day but did not report his success.

Hours of hunting and the number of birds bagged are influenced by the fact that thirty-six percent of the hunters cease hunting at noon of the second day regardless of the number of birds shot or the weather. This year some hunters with dogs reported good hunting on the afternoon of the second day in some sections of the Island.

HUNGARIAN PARTRIDGE PLANTING - ELGIN COUNTY, MARCH, 1960

Forty-nine "Huns" (25 ♂♂ and 24 ♀♀) were live trapped in the Kemptville District during the latter part of March and held in outside cages.

While in captivity, they were fed crushed grain and lettuce.

On March 28th they were fed and watered and in the evening at 9 p.m. were placed in chick cartons - 8 birds to a carton (2 to a compartment) and stored in an unheated garage.

At 7 a.m. March 29th they were loaded in a station wagon and transported to Aylmer, a distance of almost 400 miles. The windows and rear door of the vehicle were open enroute.

At Aylmer they were stored overnight in an unheated garage until release the next morning.

Following is a summary of hours in captivity and transit.

March 28-29th in cartons	10 hours
March 29th in transit	10 hours 15 minutes
March 29-30th in cartons	15 hours
March 30 in transit	30 minutes
Total time in confinement	35 hours 45 minutes

After almost 36 hours in shipping cartons, without food and water, the birds were in excellent condition. All were released at the same site. When the boxes were opened, they "exploded" into the air, formed a covey, landed within 200 yards and began to call and forage immediately.

The release site chosen was a field of high stubble with some waste grain and an abundance of green grass and other herbs in evidence. Mixed farming is carried on in the area - crops include spring and fall grain, hay, corn, and small fruits. Medium sized fields predominate separated by hedgerows and a few small woodlots.

Topography - The release site is situated on a high gravel ridge N.W. of Sparta - Lot 17 N. Conc IV Yarmouth Township (approx. 4 rd. north of Lake Erie). The ridge is 875' A.S.L. and extends east and west of the site for 8 miles. The birds have access to high land extending to the north and to lower flat lands extending to the lake bank at the 700' level. There is ample opportunity for the birds to extend their range in any direction.

Soil - The soil is fertile and well drained. Dominant types are Miand clay loam, gravelly loam and loam, with smaller amounts of Brookston clay and Conover clay. All types are slightly acid in reaction.

Weather - Weather records are available for the past fifteen - thirty years for various stations in the District. Data from these stations indicate that Elgin County is marginal for "Huns" in respect to rainfall in April, May, and June. Reports from residents suggested that rainfall on the ridge chosen for release was less than for the surrounding area. It is hoped also that the good drainage may have some beneficial effect on survival.

Survival Records - Three birds were seen on several occasions about three weeks after release, one-half mile north of the release site, in a gravel pit.

Weather following the release has been anything but favourable. Rainfall in April, May, and June has been excessive and much above average. There were several periods extending almost a week when rain fell every day, and survival may be poor, especially of chicks.

Plans are to check the area thoroughly for coveys in the early fall.

NATIVE HUNS

Weather conditions during the winter made it difficult to assess the native population in the Niagara Peninsula. However, hunters reported only a fair shoot and there is little doubt that the population was down possibly 50% from the previous year.

MOURNING DOVES

Summary of Dove Counts for Past 4 Years in Lake Erie District

	Number of Doves Seen						Total Count	Total Miles	Doves Per 100 Miles
	In Flocks 3 or more		Pairs		Singles				
	No.	%	No.	%	No.	%			
1956 (Sept. only)	2852	79	404	11	373	10	3629	5124	70.5
1957 (May - Sept.)	429	29	252	34	553	37	1486	8174	18
1958 (Apr. - Oct.)	1663	35	1578	33	1529	32	4761	21764	22
1959 (Apr. - Sept.)	591	18	1090	32	1664	50	3344	12831	26

Pelee Island (July Only)

1957	34	21	20	24	91	55	165	119	139
1958	12	8	38	28	88	64	138	288	48
1959	4	4	26	29	59	66	89	117	76

Statistics for the Mourning Dove Road County Lake Erie District 1958

Month	Number of Doves Seen						Total Count	Total Miles	Doves Per 100 Miles
	In Flocks		Pairs		Singles				
	3 or more								
	No.	%	No.	%	No.	%			
April			4	100			4	25	16
May	116	17	256	36	332	47	704	5252	13
June	137	16	350	41	379	43	866	5198	17
July	74	19	184	47	134	34	392	2898	14
August	428	39	388	35	287	26	1103	3845	29
September	902	55	374	23	371	22	1647	4237	39
October	6	13	22	49	17	38	45	309	15
District Totals	1663	35	1578	33	1520	32	4761	21764	22
Pelee Is. July	12	8	38	28	88	64	138	288	48

Statistics for the Mourning Dove Road Counts
Lake Erie District 1959

Month	Number of Doves Seen						Total Count	Total Miles	Doves Per 100 Miles
	In Flocks		Pairs		Singles				
	3 or more								
	No.	%	No.	%	No.	%			
April			2	67	1	33	3	34	9
May	59	8	302	42	355	50	715	4406	16
June	76	12	176	29	359	59	611	3116	20
July	173	22	250	33	347	45	770	1826	42
August	100	12	284	33	470	55	854	2832	30
September	183	47	76	19	132	34	391	617	63
District Totals	591	18	1090	32	1664	50	3344	12831	26
Pelee Island July	4	4	26	29	59	66	89	117	76

WILD TURKEY

One hen was reported by Don Gander in May, 1960 on the road to Port Franks.

Lots 17 - 20, Con. II, Mosa Township near Newbury.

4 seen by resident, April, 1959

2 seen by L. Kelly, August 1, 1960

Reported by L. Kelly, August 2, 1960.

WATERFOWL

Summary 1960 Waterfowl Sex Ratios Lake Erie District

Species	No. of Counts	Count		Total	Ratio	
		♂	♀		♂	♀
Mallard	20	130	114	244	100	88
Gadwall	4	6	6	12	100	100
Pintail	6	1165	1053	2218	100	90
Green-winged Teal	3	15	12	27	100	80
Blue-winged Teal	15	199	76	275	100	38
American Widgeon	13	110	55	165	100	50
Shoveler	5	35	7	42	100	20
Total Pond Ducks	66	1660	1323	2983	100	80
Redhead	24	2311	1840	4151	100	80
Ring-necked Duck	5	29	17	46	100	59
Canvasback	28	16201	2740	18941	100	17
Scaup (both spp)	40	8200	7689	15889	100	94
Common Goldeneye	14	173	142	315	100	82
Bufflehead	20	581	616	1197	100	106
Old Squaw	2	25	32	57	100	128
Ruddy Duck	3	4	1	6	100	25
Total Diving Ducks	136	27506	13077	40583	100	47
Hooded Merganser	5	9	15	24	100	167
Common Merganser	14	1250	1274	2524	100	102
Red-breasted Merganser	13	1136	875	2011	100	77
Total Mergansers	32	2395	2164	4559	100	90
All Species	234	31561	16564	48125	100	52

The above counts were taken to determine whether or not sexes were unbalanced. The figures in the last two columns illustrate the findings insofar as the Lake Erie District is concerned.

Dept. of Lands and Forests

Hunter's Record of Waterfowl Shooting

1959

Where did you hunt - name of Park, Marsh, or other location Rondeau Park ?

Please keep a record of the ducks bagged on this tally sheet and return it to the Superintendent of the Park where you received your permit.

	13.0%	6.5	6.5	6.5		13.9	1.8										
		13.0		20.4	7.4			5.5	0.9	0.9		3.7	"Grey Duck"?				
	Mallard	Black	B.W. Teal	G.W. Teal	Wood Duck	Redhead	Canvasback	Scaup	Ruddy	Coot	Merganser	Pintail		Totals		Gunner Days	
1959																	
Date Hunted																	
Oct. 3	2		3	10	4									19		11	
" 5	3												2	5		3	
" 7	1		3									2		6		3	
" 10	1				1			1						3		2	
" 13	3		1	1	2			1						8		3	
" 14														0		1	
" 15								1						1		2	
" 16	2	2				1								5		2	
" 17			1											1		2	
" 19-21	2	5		2					1		2	2		14		3	
" 24				4			1							5		3	
" 27		1	2							1	2			6		2	
" 31						3	1				1			5		2	
Nov. 6								1			3			4		2	
" 7		1		1							5			7		3	
" 14				1		4	3				2			10		2	
" 20		1					1	2						4		1	
" 21		4					1							5		2	
Totals	14	14	7	22	7	8	7	6	1	1	15	4	2	108		49*	

Summarized above: returns from 14 gunners: 41 gunner-days (Average of above: 2.2 birds (per gunner-day

bag checks of 9 gunners 8 " "
2 gunners included in both above categories.

Opening day bag check at Rondeau Park: 197 gunners took 296 birds-avg 1.5

includes 9 hunters with zero bags.

49 " " 108 " " 2.2

246 " " 404 " " 1.64

Department of Lands and Forests

Winter Waterfowl Inventory

Lake Erie District
Jan. 19 and 20, 1960
Count by Transect and Species

Species	Transect Numbers										Total	Total	Change
	1	2	3	4	5	6	7	7A	8	9	1960	1959	from 1959
Black	350	1155						1133	66		2704	9425	dec.71%
Mallard		70						132	10		212	118	inc.79%
Canvasback		200	38	8		2	832	215	437		1732	3445	dec.51%
Scaup			7			10				4	21	1619	dec.99%
Redhead			20					735	262	150	1167	0	inc.
Goldeneye	20	2666	435	345	20	247	23	61	149	2	3968	3264	inc.22%
Old Squaw						6					6	0	inc.
Merganser		80				5					85	740	dec.88%
Unident.	452	2530	1035	135	185	133	265	329	239	1	5304	8442	dec.37%
Total ducks	822	6701	1535	488	205	403	1120	2605	1167	153	15199	27413	dec.45%
Canada geese						2250		150			2400		
Swans				2				15			17		

Miner's Sanctuary Canada Geese 2000 included in above

Jones" Sanctuary Canada Geese 75 not included

Ducks 75 in above (ground tally)

Crew: C. LaFebre, R.D. Ussher, T. A. Carter, E. G. Wilson

Canvasback and Redhead Counts
For the Past Ten Years Showing
The Percentage of Each in the Total

Year	Total	Canvasback	% of Total	Redhead	% of Total
1951*	44563	4167	9.3	20	
1952	43087	10408	24.	2100	4.9
1953	76105	23336	31.	1813	2.3
1954	33151	5516	18.	0	
1955	53672	12741	24.	34	
1956	32407	4889	15.	40	
1957	58061	32693	56.		
1958	53352	26345	49.		
1959	27413	3445	12.5		
1960	15199	1732	11.5	1167	8.1

* Ontario Total - Remainder Lake Erie Totals

Transect 7 Only (Detroit River)
January 29, 1960

	Count		Difference from Air Count
	By Air	From Shore	
Black	0	2	
Mallard	0	2	
Canvasback	832	1694	Increase 104%
Scaup	0	3211	
Redhead	0	4	
Goldeneye	23	2543	Increase 1090%
Old Squaw	0	0	
Bufflehead	0	105	
Merganser	0	0	
Unidentified	265	3502	Increase 1230%
Total	1120	11063	Increase 890%

The count from shore includes only the east side of the river. We have no figures for the west side. However, the number of Canvasbacks is much greater than the air count shows. One resident estimated the Canvasback population at 2-3000 on the north end of the River.

Transects for the Winter Waterfowl
Inventory
January 19, 20, 1960

1. Lake Ontario from Hamilton to Niagara-on-the-Lake, including Old Welland Canal.
2. Niagara River to Fort Erie.
3. Fort Erie to Long Point.
4. Long Point to Port Stanley (including Jones Sanctuary).
5. Port Stanley to Rondeau.
6. Rondeau to Amherstburg.
7. Detroit River - Amherstburg to Lake St. Clair.
- 7a. Lake St. Clair.
8. St. Clair River to Point Edward.
9. Point Edward - Grand Bend. (Not complete in 1960 due to snow)

Weather

January 19th

Temperature 25°. Broken cloud to overcast, wind N.W. 20 m.p.h. Snow flurries, clearing by midday. Snow prevent count beyond Point Edward.

January 20th

Temperature 20° in a.m. Clear with broken alto cumulus clouds.

January 28th

Clear, sunny. Ice conditions.

January 19th and 20th

Pack ice in Lake Ontario

Niagara River open

Pack ice along shore of Lake Erie

Pack ice at Long Point. Bay frozen, open water at tip of Point.

Open water in Lake at Rondeau - Bay frozen over with open pockets.

Lake open east of Point Pelee, 85% frozen West of Point Pelee

Detroit River 75% open

Lake St. Clair 95% frozen

River St. Clair open

Lake Huron 90% pack ice.

January 28th

Detroit River 80% open. Ice on Canadian side east of Islands.

Altitude 400 - 500 feet - 800 in hazardous areas.

Crew: Lafevre, Carter, Ussher, Wilson.

Comments

The count by air this year (1960) is by far the lowest on record, being 45% below 1959 which was in turn the lowest for the past 10 years.

The count of canvasbacks is also the lowest recorded during the past 10 years. The records indicate that the recent marked reduction in the population occurred during 1958. The decrease in 1960 was approximately 50% over the previous year.

Duck Wing Collection, Southern Ontario, 1960.

During the fall of 1960 field staff of the districts of Erie, Huron, Simcoe, Lindsay, Tweed, and Kemptville which border on the Great Lakes contacted sportsmen in the field to collect duck wings and asked duck club members to save wings from their kill.

This resulted in a collection of 4498 wings from 24 species of ducks. In early January these were sent to Maple and on January 12th and 13th a course in aging and sexing this material was given. We should like to express here our appreciation to Dr. A. Geis and Mr. S. Carney of the United States Fish and Wildlife Service who came to Ontario to give this instruction to nineteen Lands and Forests staff, two from the Ontario Agricultural College, Guelph, one from the Royal Ontario Museum of Zoology and one from the Canadian Wildlife Service.

The wings had not been placed in individual envelopes. Unfortunately this resulted in some matting of the feathers and decomposition which caused the rejection of an unfortunately high proportion of the specimens.

Only a few of the collections from individual marshes represent the kill from opening day while most represent a sample collected throughout the season.

The results of the age and sex and species determinations are presented in Tables 1 to 4.

Table No. 5 gives the age ratios for those species for which a sample of more than 100 aged wings are available.

Table No. 1

Eastern Ontario - Kemptville, Tweed, Lindsay, Lake Simcoe

	<u>Ad ♂</u>	<u>Ad ♀</u>	<u>Imm ♂</u>	<u>Imm ♀</u>	<u>Reject</u>	<u>Total</u>
Mallard	11	15	79	48	51	204
Black Duck	26	24	145*		41	236
Mallard x Black					3	3
Pintail	6	2	4	9	4	25
Baldpate	1	0	6	3	0	10
Gadwall	0	1	7	4	3	15
Green-wing Teal	8	22	36	38	76	180
Blue-wing Teal	14	21	29	26	55	145
Shoveler					7	7
Wood Duck	21	10	49	32	27	139
Redhead	0	3	28	24	3	58
Ringneck	5	1	17	18	17	57
Canvasback	6	4	9	5	2	26
Greater Scaup	2	3	13	13	3	34
Lesser Scaup	1	11	24	19	6	61
Goldeneye					42	42
Bufflehead					15	15
Hooded Merganser					14	14

1271

* Ontario Black Ducks appear to be unusually large. Inadequate sex criteria are available for immature black ducks in Ontario so the sexes have been combined.

Table No. 2

South Western Ontario, - Huron, Erie

	<u>Ad ♂</u>	<u>Ad ♀</u>	<u>Imm ♂</u>	<u>Imm ♀</u>	<u>Reject</u>	<u>Total</u>
Mallard	84	80	204	192	205	765
Black Duck	86	62	181		213	542
Mallard x Black					16	16
Pintail	11	3	31	18	3	66
Baldpate	30	5	34	35	2	106
Green-wing Teal	4	8	8	17	9	46
Blue-wing Teal	1	3	0	3	3	10
Wood Duck	1	0	3	1	0	5
Redhead	3	1	5	4	0	13
Canvasback	0	0	2	0	0	2
Ringneck	1	0	0	1	0	2
Ruddy Duck					17	17
King Eider					1	1
						1591

Table No. 3

Long Point - Lake Erie

	<u>Ad ♂</u>	<u>Ad ♀</u>	<u>Imm ♂</u>	<u>Imm ♀</u>	<u>Reject</u>	<u>Total</u>
Mallard	94	39	152	132	68	485
Mallard x Black	--	--	--	--	--	25
Black Duck	88	59	133		72	352
Pintail	69	14	32	23	8	146
Baldpate	54	18	24	31	0	127
Gadwall	1	0	4	3	0	8
Wood Duck	1	0	3	4	0	8
Green-wing Teal	12	6	29	24	36	107
Blue-wing Teal	0	3	20	15	0	38
Redhead	1	0	2	5	0	8
Ringneck	7	2	21	17	6	53
Canvasback	0	3	2	0	0	5
Greater Scaup	0	0	6	2	0	8
Lesser Scaup	1	2	20	15	0	38
Goldeneye	1	0	2	1	0	4
Bufflehead	0	0	0	2	0	2
Hooded Merganser	1	0	0	0	0	1
						1415

Niagara River and Eastern Lake Erie
(Wings too decomposed to age or sex)

Mallard	5
Black Duck	11
Shoveler	4
Redhead	5
Canvasback	12
Greater Scaup	84
Lesser Scaup	43
Ruddy Duck	2
Goldeneye	6
Bufflehead	6
Old Squaw	11
Hooded Merganser	7
Red-breasted Merganser	12
American Merganser	4
American or Surf Scoter	1
White-winged scoter	1
King Eider	7

221

Table No. 5

Age Ratios of Ducks taken in Southern Ontario

	<u>Long Point</u>	<u>Southwestern Ontario</u>	<u>Eastern Ontario</u>
Mallard	2.13 : 1	2.41 : 1	4.88 : 1
Black	.90 : 1	1.22 : 1	2.90 : 1
Pintail	.66 : 1	--	--
Baldpate	.76 : 1	2.00 : 1	--
Green-wing Teal	--	--	2.47 : 1
Blue-wing Teal	--	2.28 : 1*	--
Wood Ducks	--	--	2.70 : 1

* Collection from all areas combined

Spring Census

The 1960 spring census was limited to one township. It was felt that in this way it would be a more concentrated study.

The township of Carpenter was chosen as it was felt that it was average as far as favourable habitat was concerned in the townships in the farming area.

The township of Carpenter is made up of approximately 24,000 acres of land. Twenty per-cent or 4800 acres of this is D.A.L. or grass lands. Fifteen per-cent or 3600 acres is muskeg. The remaining sixty-five per-cent is made up of young poplar - 0 - 20 year age class.

Method of Taking Census

In May dancing grounds were located. This was accomplished by driving roads and stopping every half mile. Practically all the township was covered in this manner as it was fairly well divided by roads.

It is felt that all dancing grounds were located. To make a more accurate census, each dancing ground was visited several times at intervals and a recount made and recorded each time.

Results of Census

A total of six dancing grounds were located in the townships. The following is a list which consists of the largest number of birds found in each dancing ground on our various visits:

Dancing ground no. 1 - 24 birds

Dancing ground no. 2 - 11 birds

Dancing ground no. 3 - 18 birds

Dancing ground no. 4 - 14 birds

Dancing ground no. 5 - 9 birds

Dancing ground no. 6 - 12 birds

Total No. of birds on dancing grounds - 88.

It is assumed that all birds on the dancing grounds at the time of counting were males. By using a ratio of 2 males to each female we theoretically devise that there are 132 birds on 36 square miles of land or 3.45 birds per square mile. This would be before nesting takes place.

It is not known, however, just how much land these birds are utilizing outside the township or how much of the 36 square miles would be suitable sharp-tail habitat.

Let us assume also that all birds do nest in the township and that four of each brood reach maturity. We then should have by fall a population of 8.5 birds per square mile. This, of course, is computed on theory and assumption only.

Live Trapping and Banding

A shortage of men and the fact that the walleye run coincided with the time the trapping was done meant it was impossible to put in enough time at it to produce total satisfactory results.

The cannon nets were set five times each on a different date.

1st - Set - cannons had too much elevation and the birds flew before the net settled over them.

2nd - Set - the net caught in heavy stubble and thus pulled to one side.

3rd - Set - five birds were caught. Three were banded and released, the other two were badly injured with broken wings.

4th - Set - four birds were caught. Three were banded and released. One was dead when taken from net.

5th - Set - five birds were caught. Four were banded and released. One had a broken wing.

Total number banded and released - 10 birds.

1st, 2nd, and 3rd sets of nets were on a dancing ground holding 18 birds. The area was situated on a field of grain that had been cut by combine. The heavy stubble proved to be a difficult area in which to set and release the net without damaging it.

4th and 5th sets of nets were on a dancing ground of 12 birds. This area was situated on a plowed field which proved an easier setting in which to utilize the nets. Burlap bags were also used on the 4th and 5th settings to cover the birds with until they were taken out from under the net. This proved quite satisfactory as a means to quiet the birds and thus prevent them from injuring themselves.

It is felt that experience gained this year in handling the cannon net should make future efforts run more smoothly and thus produce more satisfactory results. We also felt that with the use of burlap bags there could be a greatly reduced number of dead and injured birds.

Nesting

Ten nests were located around the six dancing grounds previously mentioned. These nests were checked periodically.

Listed below are the results of these checks.

<u>Nest No.</u>	<u>No. of Eggs</u>	<u>No. Hatched</u>
1	12	9
2	8	8
3	14	10
4	10	10
5	12	destroyed
6	11	9
7	13	11
8	9	9
9	11	8
10	12	destroyed

Average number of eggs per nest - 11.2

Percent of hatch - 66%

Number 5 nest was completely destroyed, from indications it appeared to be skunks.

In nest number 10 three eggs were broken and the nest was deserted as a result. It is not known if any renesting occurred.

We were unable to keep track of individual coveys after they were hatched. It is believed at this time greatest mortality occurs.

If future nesting work is done it may be of some value if coloured bands were placed on nesting hens or coloured tail feathers attached to identify individual broods. Perhaps in this way it would be possible to ascertain the mortality rate after hatching occurs.

Food

The crops of 21 sharp-tail grouse were examined during the fall of 1960 in an effort to establish if any changes in their food habits occurred as the season progressed.

Twelve of the twenty-one birds examined were taken in the first two weeks of the hunting season.

The following is a list of what the crops contained.

2 birds - grasshoppers
1 bird - corn & clover
1 bird - grain (oats)
8 birds - clover

It is felt from observation that at this time of year the birds feed heavily on muskeg berries. The reason the crops examined did not contain berries is probably because birds feeding on a muskeg, unless fairly close to a road, are virtually free from hunting pressure.

Nine other bird crops were examined at different periods throughout the remainder of the season. Two of the nine examined were road kills after the season was closed.

October 10 - 2 birds - clover
October 21 - 1 bird - clover & blueberries
October 31 - 1 bird - empty 1 bird - clover
November 19 - 1 bird - cranberries
November 21 - 1 bird - cranberries
December 2 - 1 bird - Aspen buds
December 6 - 1 bird - Aspen buds

Fall Sex & Age Ratios

	Adults		Juveniles		Total
	Male 12	Female 8	Male 44	Female 20	
Sex Ratio:	1960	1959	1958	1957	
	2 ♂ : 1 ♀	--	76 ♂ : 100 ♀	81 ♂ : 100 ♀	
Juv: Adult Ratio	3.2 : 1	--	1.77 : 1	2.16 : 1	
Juv: Adult Female Ratio	8 : 1	--	3.07 : 1	4.33 : 1	
1958 sample - 144 birds					
1957 sample - 38 birds					

Ratios for the 1958 and 1957 seasons are shown for comparison - there were no ratios obtained for the 1959 season. We are unable to interpret this.

Management

Considering the seemingly stable population at present and the light hunting pressure on sharp-tail grouse in the district, it is debatable

whether any management program would be justified at the present time. We do feel, however, that in the near future the sharp-tail grouse will come into its own as a game bird to both resident and non-resident hunters. It has been noted already in the past two years that there has been a very noticeable increase in the number of non-resident hunting parties coming into the district for the sole purpose of hunting sharp-tails. This has been most noticeable in the west end of the farming district. There seems to be also a growing number of resident hunters taking to the fields with shot guns instead of driving the roads with .22 rifles.

If management of grouse is not practical at this time we feel it will be in the near future in a minor degree at least. There are two techniques which could be applied in a management program of sharp-tail grouse in the Fort Frances area. These are:-

- (1) regulating the hunting season,
- (2) improved habitat.

(1) Regulating the season could act as a means of limiting the kill or increasing it. A late opening of the season would mean a low kill. Cold cloudy and windy weather, young birds starting to mature, and flocking tendencies starting around mid-October. All could tend to attribute to wild nervous birds. What ever the reason the birds do become wild as the season progresses regardless of the hunting pressure.

By opening the season earlier the kill could be increased. During the first two weeks of the present season the birds will usually sit fairly well for either "walking them up" or using dogs. If the season was opened a week earlier the total kill would be increased. The birds at this time are still in small coveys and would hold fairly well. However, we wonder if the young birds would be mature or big enough at this time. Late hatches would undoubtedly be fairly small.

Perhaps because of the low kill in the district at the present time some consideration should be given to opening the season earlier to increase the total kill.

(2) Improved habitat is probably the most important management technique. At present there appears to be sufficient summer food. It has come to our attention, through the number of abandoned farms grown back up and the planting of seedlings on most of the available cleared crown land, that this does reduce the open spaces with grass and shelter which serve as dancing and nesting areas.

Quite a bit of poplar in the farming district is at the stage where it is of little use to game and has little or no commercial value.

Controlled burning in such areas as well as abandoned farmland would have much value. It would open up areas suitable for sharp-tail habitat and also bring forth a new growth of poplar which would provide browse for deer.

Many thanks must be considered, however, before such burning should be carried out, the potential commercial value of the area in respect to timber, and the proper control of such fires.

Hungarian (Gray) Partridge Report, Kemptville District.

The following report summarizes available Hungarian (Gray) Partridge information for the period January 1, 1960 to January 31, 1961. Although some of the following information has been summarized in previous reports, references will be made to data collected prior to 1960 for purposes of comparison.

General

Although the winter of 1959-60 was fairly severe with deep snow and low temperatures, partridge wintered well and an excellent breeding stock appeared to be present as late as March 1960.

Weather across the main partridge range was poor, especially in May when heavy rainfall occurred early in the month; this was followed by unseasonably low temperatures. Chick and egg mortality no doubt caused the lower than average covey size noted this fall; average covey size was also influenced by a greater percentage of renesting this year. Hunting pressure was the heaviest we have seen and a few of the smaller coveys were seriously reduced in size. While our December census has turned up some surprisingly strong coveys, and it is evident that a good many coveys, no doubt, were not shot over at all, a larger sample of birds observed in January indicated that coveys were significantly smaller than usual.

Winter Covey Counts

Our December and January census gives a good idea of partridge mortality during the hunting season. Later counts indicate regression in covey size throughout the winter months, and show the effects of weather, predation, etc., on survival, as well as the potential spring breeding population.

Table 1 shows averages for pre-season covey sizes compared to average covey size later in the winter.

Pre-season coveys in 1960 were the smallest on record, averaging only 11.4 birds. December counts are too few to be reliable, but the large January sample shows a reduction of only 25 percent from the pre-season average. This may represent actual conditions, but it is possible that very small coveys have joined forces, masking actual mortality from September to January.

Although December data are meagre, they do suggest that about 25 percent of the pre-season population is lost by late December, about 35 percent by mid-January and about 40 percent by mid-February.

Since figures on monthly covey size are averages of counts taken during each month, coveys would be somewhat smaller at the end of each month than is indicated in Table 1. By the end of February the average covey contains closer to eight birds and the reduction from the pre-season population would approach 45 percent on an annual basis.

We were surprised at the remarkable similarity in average covey size for the month of February even when substantial differences in average fall covey size occurred. This suggests that fall and winter losses may be density-dependent.

Winter

The past two winters have been most severe, with deep snow and periods of extremely low temperatures. We have seen no evidence that normal winter weather (no sleet) has seriously affected partridge populations, and in good range, the birds withstand extreme weather very well. We consider that a very good Hun population survived to late February and early March, 1960. At this time, coveys break up and pairs are not seen very often.

Winter Trapping

Although snow was deep, partridge were difficult to trap in 1960 and considerable effort was required to catch the 50 birds which were sent to Elgin County. Intermittent mild weather seemed to affect trapping results and it may be that continuing cold weather is needed to trap Huns successfully.

Our wire "funnel" traps were modified somewhat last winter and a "trap door" type operated with propped stick and attached string appeared to work better under certain conditions; this type of trap catches the complete covey more frequently than does the "funnel" type.

The Nesting Season

The main nesting period was considerably later than in 1959, but only slightly later than the long term average. Figure 1 indicates graphically the main peak of the hatch for the past several years; data were taken from wing moult data as described by Petrides (1951).

Table 1

Regression in Average Covey Size by Month and

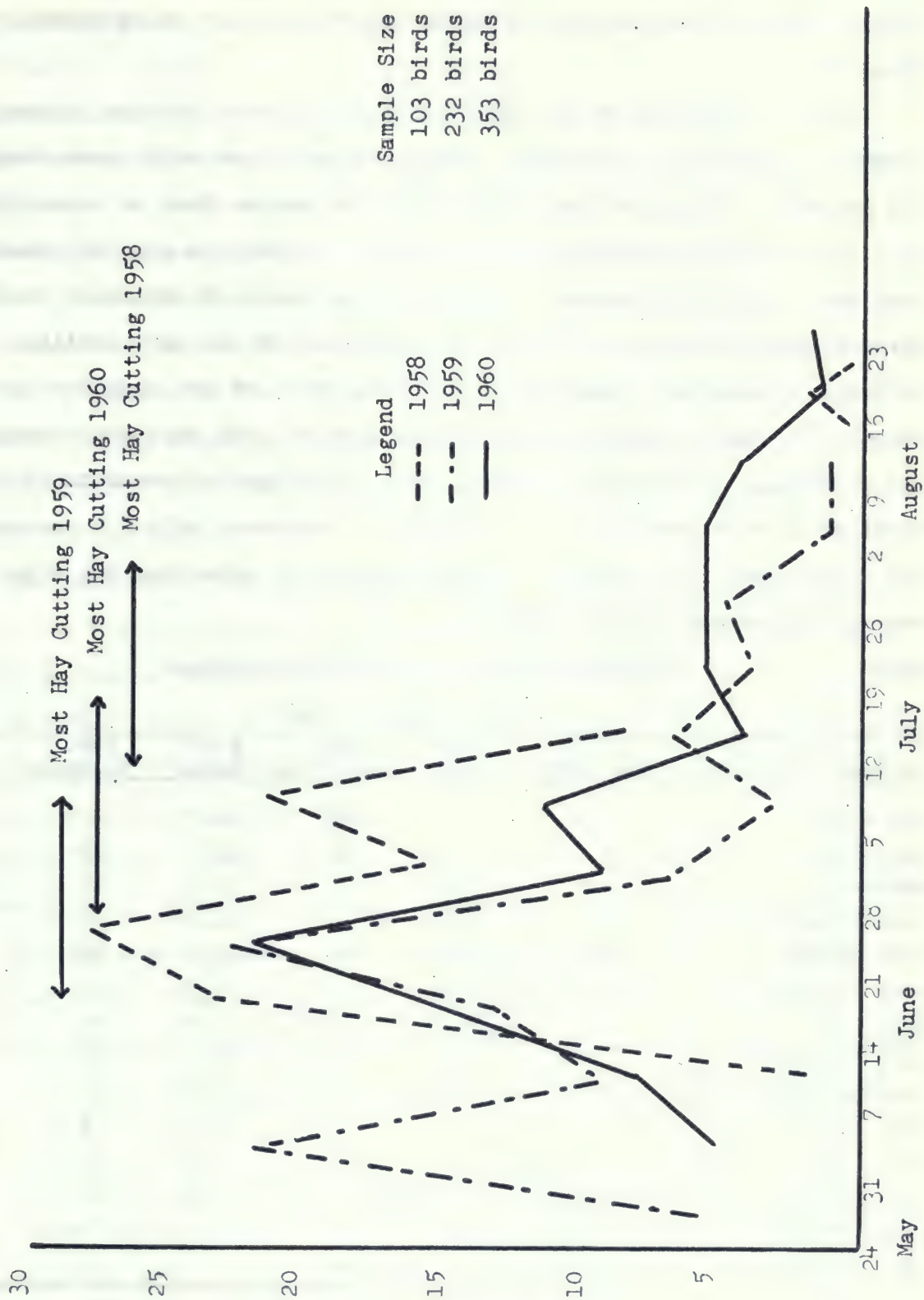
Percent Reduction from Pre-season Averages

<u>Year</u>	<u>Month(s)</u>		<u>Average Covey Size</u>	<u>Percent Reduction from Pre-season Avg.</u>
1951-52	Sept-Oct*	1951	12.7 (30) **	
	December	1951	9.7 (16)	23.6
	January	1952	7.9 (12)	37.8
1957-58	Sept-Oct.	1957	16.2 (33)	
	December	1957	----	
	January	1958	10.4 (33)	35.8
	February	1958	9.6 (44)	40.7
1958-59	Sept-Oct.	1958	15.3 (21)	
	December	1958	11.1 (33)	27.4
	January	1959	10.5 (49)	31.3
	February	1959	9.1 (42)	40.5
1959-60	September	1959	15.5 (42)	
	December	1959	----	
	January	1960	9.9 (63)	36.1
	February	1960	8.9 (32)	42.6
1960	September	1960	11.4 (36)	
	December	1960	11.4 (9)	
	January	1961	8.5 (63)	25.4

* Census conducted in September and first few days of October. Only unshot coveys recorded.

** Number in Brackets denotes number of coveys in sample.

Fig. 1 Hatching Dates of Hungarian Partridge - From Wing Moult Data 1958-59-60



A warm sunny April was followed by cool wet weather in May, and although little rain of any consequence fell in June, temperatures during the both months were below normal. This, we believe, resulted in an abnormally high loss of initial nesting attempts and resulted in an increase in renesting.

Table 2 shows that 64 of 353 birds hatched after July 26, giving a renesting figure of 18 percent. This compares to an eight year average of 8.5 percent. It was evident during the open season that an unusually large percentage of very young birds was present; by far the greatest number we have seen. In 1959, because of a very early hatch we estimated that all birds which hatched after July 12 were the result of two or more nestings. This produced a renesting figure of 17 percent, which we now consider unrealistic, especially when we consider the average size of 1959 September coveys (15.5 birds). If the usual date of July 26 is used to separate initial nestings from renestings, then renesting constituted only 6.4 percent of the 1959 sample. This latter figure was used in obtaining the eight year renesting average of 8.5 percent.

Table 2 Hatching Dates of Hungarian Partridge

1958 - 1959 - 1960						
Period	1958 No. Birds	% of Total	1959 No. Birds	% of Total	1960 No. Birds	% of Total
May 25-31	--		14	6.0	--	
June 1-7	--		51	22.0	19	5.38
June 8-14	2	1.9	22	9.5	29	8.21
June 15-21	24	23.3	30	12.9	52	14.73
June 22-28	29	28.1	54	23.3	80	22.66
June 29-July 5	16	15.5	15	6.5	33	9.35
July 6-12	22	21.4	7	3.0	41	11.61
July 13-19	8	7.8	15	6.5	15	4.25
July 20-26	--		9	3.9	20	5.67
July 27-Aug. 2	--		11	4.7	19	5.38
Aug. 3-9	--		2	.9	20	5.67
Aug. 10-16	--		2	.9	15	4.25
Aug. 17-23	2	1.9	--		4	1.13
Aug. 24-27	--		--		6	1.71
Total	103		232		353	

For the second year a special effort was made to locate partridge nests. In the summer of 1959, two men searched for nests for over one week in late May and early June. Several methods were tried; the most promising included dragging, across grassy cover, a nylon rope with tin cans containing rattling stones attached. No nests were located during the intensive searches and it has been demonstrated on several occasions that hen partridge sit very tightly and are difficult to flush. Several sources state that hens flush more readily in the early stages of incubation, but this has not been borne out, at least in two instances. A tractor mowing hay on July 3, 1959, "straddled" a hen partridge before she flushed. One egg was taken from the nest and inspection showed that the embryo was in the 7th day of development. The next day I touched the hen with my hand before she flushed. In June 1960 a farmer fixing a fence stepped on an incubating hen partridge. The hen escaped without injury and an egg taken from the nest was found to be in the 5th day of incubation.

Very few nests have been observed to date. In 1959 we visited several schools in the Winchester area and requested that all nests be reported to us. Although several pupils told of finding nests previously, no nests were reported in 1959. This year we publicized our request for nest locations in the Winchester and Chesterville papers and two nests were reported to us. Table 3 summarizes our nesting data.

Haying in 1960 was late, due to very wet weather in May and unseasonably low temperatures in both May and June. The first field mowed was noted on June 16, but the peak of mowing did not occur until the first two weeks in July. Slightly less than 50 percent of 80 hayfields observed between Winchester Springs and Kemptville had been mowed by July 12, 1960. Hayfield counts will be made in future to obtain accurate information concerning hay mowing.

Since the peak of the hatch and the main mowing period compares closely to similar data during previous years, we can assume that nest losses from farming activities should have been about normal. Wet, cool weather probably caused the increase in renesting and late hatches.

Table 3

Area	Year	No. Eggs	Location of Nest	Remarks
Alexandria	1958	16	Roadside Grass	Hatched July 5
Winchester Springs	1959	21	Hayfield	Eggs pipping June 28, Hen killed by mower. All lost.
Ingleside	1959	23	Roadside Grass	Full clutch on May 28. Mowing caused desertion.
Munster	1959	17	Hayfield 10' from fence	Embryo 7 days old on July 3/59. Hen incubated, but predator destroyed nest.
Brinston	1959	18	Hayfield near edge	Mowed over nest. Hen killed.
Brinston	1958	21	Hayfield near edge	Nest mowed over. Deserted.
Alma	1960	22	Directly under page wire fence in grass	20 hatched June 29.
Ingleside	1960	19	Roadside grass	13 hatched last week in June.
Ingleside	1960	14	Open grass, 40 ft. from road. Near small tree.	All hatched - time unknown.

Pre-season Covey Counts

The months of August and September were unusually hot and dry and poor scenting conditions made the pre-season census difficult. The average size of 36 coveys was 11.4 birds compared to an eight year average of 13.4 birds.

The 1960 Open Season

The season extended from September 24 to November 19. Most birds were harvested during the first week and hunting pressure was the heaviest we have seen during the past five years. Greater interest in the Hun has been shown locally and more pointing dogs are appearing each year from the Ottawa area. We still consider the Hun populations could withstand much greater hunting pressure and present hunter densities still must be considered light.

Birds were difficult to locate early in the season, and hot, dry weather conditions probably had much to do with this. Huns were "down" somewhat from 1959; coveys may have been as numerous, but there were more small coveys and a greater percentage of young, immature birds than usual.

Hunting Success

Although most parties considered Hun shooting to be moderately good, hunting success did drop this year as Table 4 indicates.

Table 4

Hungarian Partridge Hunting Success 1956 - 1960

<u>Year</u>	<u>No. Gun-days</u>	<u>Birds Taken</u>	<u>Birds/Gun Day</u>
1956	12	35	2.9
1957	56	188	3.3
1958	40	146	3.6
1959	77	371	4.8
1960	194	747	3.9

Sex and Age Ratios

Table 5 summarizes 11 years of sex and age data. Since 1950, 2,412 Huns have been sexed and aged.

Table 5 Sex and Age Ratios of Hungarian Partridge
 Hunters' Bags - 1950 - 1960

<u>Year</u>	<u>Total Birds</u>	<u>Juv/ Adult</u>	<u>Juv/ Adult ♀</u>	<u>% Adult ♂</u>	<u>♀</u>	<u>% Juvenile ♂</u>	<u>♀</u>
1950	140	4.84	8.92	45.8	54.2	46.8	53.2
1951	169	4.28	13.70	67.7	32.3	41.8	58.2
1952	153	3.02	11.50	70.6	29.4	52.2	47.8
1953	252	1.65	3.48	52.6	47.4	37.7	62.3
1954	213	3.01	8.00	62.3	37.7	38.6	61.4
1955	12	5.00	5.00	--	--	40.0	60.0
1956	35	1.91	5.75	66.6	33.4	56.5	43.5
1957	140	6.00	13.33	55.0	45.0	52.1	47.9
1958	209	3.89	11.00	64.1	35.9	48.4	51.6
1959	466	5.13	11.10	53.0	47.0	46.9	53.1
Average - 10 years		3.53	8.47	57.9	42.1	45.6	54.4
1960	623	2.64	6.45	58.5	41.5	48.6	51.4

Our observations concerning smaller covey size this year are borne out by the low ratio of juveniles to adults. The 1960 ratio of 2.64 is the third lowest in eleven years, and the second lowest if the meagre 1956 data are omitted. It compares with a 10 year average of 3.53. The very low ratio of

1.65 in 1953 preceded a partridge decline in 1955, and we hope history does not repeat itself in this respect. It should be noted also, that the 1960 ratio of juvenile to adult female is 6.45, about one-half the figure for this ratio during the past three years. The 10 year average is 8.47.

A good nesting season in 1961 is required if Huns are to maintain good densities. Adverse weather for the second consecutive year during the critical summer period could lower the 1961 fall population drastically.

Luther Marsh Harvest and Utilization, 1960.

An estimate of the total harvest and utilization of Luther Marsh is made to better understand the migratory bird population and the value of the area to wildfowl hunters.

The 1960 season for migratory birds opened October 1st, 1960 and extended to November 30th, 1960, when the marsh became frozen. The estimate of harvest and utilization is based on a count of cars, both morning and evening, with a complete check of all hunters at one of five checking stations each evening. The evening check being rotated between all of the five stations.

The information is continuous for the period of October 1st, to November 30th, 1960, with the exception of the week of October 31st, to November 5th, when sufficient staff was not available for the full week. The week of November 7th to November 12th, does not appear to be complete from a standpoint of harvest statistics. The morning and evening count of cars has been made but from the average daily kill of the previous and preceding week it would appear that accurate harvest statistics are lacking for this period.

All projections of harvest and utilization will be minimum as many hunting parties only hunted a few hours and were not present when car counts were made. The period of October 31st to November 12th has harvest statistics for only three days, which further reduce harvest estimates.

Luther Marsh

Estimated Number of Hunters by Days

Oct. 1	1,875	Nov. 1	20
3	180	2	
4	57	3	
5	84	4	
6	53	5	183
7	58	7	58
8	223	8	52
10	296	9	31
11	15	10	27
12	13	11	52
13	23	12	142
14	22	14	37
15	131	15	17
17	24	16	24
18	22	17	12
19	16	18	16
20	13	19	120
21	34	21	18
22	193	22	23
24	27	23	24
25	22	24	16
26	30	25	8
27	34	26	160
28	53	28	4
29	312	29	9
31	-	30	29

Total estimated hunters 4,892.

Hunter Success by Weeks

Oct.	1	0.61
	3- 8	0.39
	10- 15	0.23
	17- 22	0.87
	24- 29	0.07
Oct. 31 - Nov. 5		not checked
Nov.	7- 12	0.05*
	14- 19	0.31
	21- 26	0.24
Nov. 28 - Dec. 3		0.24
Dec.	5- 10	
	11- 15	

* Statistics not complete

Species Composition of Hunters' Bag

	Oct. 1		3		4		5		6		7	
	N	%	N	%	N	%	N	%	N	%	N	%
Mallard	294	32.2	36	42.9			9	69.2				
Black	94	10.3	9	10.7	4	19.1						
B.w. Teal	172	18.9	9	10.7					9	53.	5	13.9
G.w. Teal	125	13.7	12	14.3	13	61.8	4	30.8	4	23.5		
Pintail	22	2.4	6	7.1								
Shoveler	6	.7										
Scaup Sp.	35	3.8	6	7.1							24	66.7
Redhead	9	.9										
Canvasback	1	.1										
Ruddy Duck	65	7.1										
Wood Duck	9	.9										
Baldpate	53	5.8	3	3.6					4	23.5	7	19.4
Gadwall	10	1.1	3	3.6	4	19.1						
Ring-necked Duck	11	1.2										
Bufflehead	2	.2										
Merganser Sp.	4	.4										
	912	99.7	84	100	21	100	13	100	17	100	36	100

Species Composition of Hunters' Bag Cont'd

	Oct. 8		10		11		12		13		14		15	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Mallard	32	38.1	26	56.5	1	25.			3	30.0	5	15.6	4	22.2
Black	16	19.1	10	21.7	3	75.			3	30.0	19	59.4	4	22.2
B.w. Teal	5	5.9											4	22.2
G.w. Teal	16	19.1	5	10.9					1	10.0	3	9.4	2	11.1
Pintail	5	5.9												
Shoveler														
Scaup Sp.	5	5.9	5	10.9							5	15.6		
Redhead							1	33.3						
Canvasback														
Ruddy Duck							2	66.6						
Baldpate	5	5.9											4	22.2
Gadwall									3	30.0				
Ring-necked Duck														
Bufflehead														
Merganser Sp.														
	84	99.9	46	100	4	100	3	99.9	10	100	32	100	18	99.9

Species Composition of Hunters' Bag Cont'd

	Oct.17		18		19		20		21		22	
	N	%	N	%	N	%	N	%	N	%	N	%
Mallard	8	15.4	5	26.3	6	33.3	8	36.4	7	77.7	16	33.3
Black	40	76.9	9	47.4			11	50.0	2	22.2	16	33.3
B.w. Teal					6	33.3						
G.w. Teal											16	33.3
Pintail	4	7.7	5	26.3			3	13.6				
Shoveler												
Scaup Sp.												
Redhead												
Canvasback												
Ruddy					6	33.3						
Wood Duck												
Baldpate												
Gadwall												
Ring-necked Duck												
Bufflehead												
Merganser Sp.												
	52	100	19	100	18	99.9	22	100	9	99.2	48	99.9

Species Composition of Hunters' Bag Cont'd

	Oct.24		25		26		27		28		29		31	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Mallard	10	71.4	9	64.3	2	16.6			2	100.0	5	83.3		
Black	2	14.3			5	41.7					1	16.6		
B.w. Teal			1	7.1	3	25.0								
G.w. Teal			1	7.1			2	66.6						
Pintail							1	33.3						
Shoveler														
Scaup Sp.			2	14.3										
Redhead														
Canvasback			1	7.1										
Ruddy	1	7.1												
Wood Duck														
Baldpate	1	7.1			2	16.6								
Gadwall														
Ring-necked Duck														
Bufflehead														
Merganser Sp.														
	14	99.9	14	99.9	12	99.9	3	99.9	2	100.0	6	99.9		

Species Composition of Hunters' Bag Cont'd

	Nov. 1					5		7			
	N	%	2	3	4	N	%	N	%	8	9
Mallard	5	50.0				41	40.1	7	41.2		
Black	5	50.0				20	19.6	4	23.5		
B.w. Teal											
G.w. Teal						7	6.9				
Pintail											
Shoveler											
Scaup Sp.						27	26.5	4	23.5		
Redhead						7	6.9	2	11.8		
Canvasback											
Ruddy Duck											
Wood Duck											
Baldpate											
Gadwall											
Ring-necked Duck											
Bufflehead											
Merganser Sp.											
	10	100.0				102	100.0	17	100.0		

Species Composition of Hunters' Bag Cont'd

	November					16		17		18	
	10	11	12	14	15	N	%	N	%	N	%
Mallard						20	69.0	4	22.2		
Black						7	24.1	5	27.8	8	33.3
G.w. Teal						2	6.9	1	5.6		
G.w. Teal											
Pintail											
Shoveler											
Scaup Sp.								5	27.8	16	66.6
Redhead											
Canvasback											
Ruddy Duck								1	5.5		
Wood Duck											
Baldpate											
Gadwall											
Ring-necked Duck											
Bufflehead								2	11.1		
Merganser Sp.											
						29	100.0	18	100.0	24	99.9

Species Composition of Hunters' Bag Cont'd

	Nov. 21	22 N %	23 N %	24	25	26 N %	28
Mallard						10 18.2	
Black		2 100.	12 100.			25 45.4	
B.w. Teal							
G.w. Teal						5 9.1	
Pintail							
Shoveler							
Scaup Sp.						15 27.3	
Redhead							
Canvasback							
Ruddy Duck							
Wood Duck							
Baldpate							
Gadwall							
Ring-necked Duck							
Bufflehead							
Merganser Sp.							
		2 100.	12 100.			55 100.0	

Species Composition of Hunters' Bag Cont'd

	Nov. 29	30 N %
Mallard		3 30.0
Black		4 40.0
B.w. Teal		
G.w. Teal		
Pintail		
Shoveler		
Scaup		3 30.0
Redhead		
Canvasback		
Ruddy Duck		
Wood Duck		
Baldpate		
Gadwall		
Ring-necked Duck		
Bufflehead		
Merganser Sp.		
		10 100.

Estimated Total Daily Kill by Species

October	1	3	4	5	6	7	8	Week 10	11	12	13	14	15	Week
Mallard	294	36		9			32	77	26	1	3	5	4	39
Black	94	9	4				16	29	10	3	3	19	4	39
B.w. Teal	172	9			9	5	5	28					4	4
G.w. Teal	125	12	13	4	4		16	49	5		1	3	2	11
Pintail	22	6					5	11						
Shoveler	6													
Scaup Sp.	35	6				24	5	35	5			5		10
Redhead	9									1				1
Canvasback	1													
Ruddy Duck	65									2				2
Wood Duck	9													
Baldpate	53	3			4	7	5	19					4	4
Gadwall	10	3	4					17			3			3
Ring-necked Duck	11													
Bufflehead	2													
Merganser Sp.	4													
	912						255							113

Estimated Total Daily Kill by Species Cont'd

October	17	18	19	20	21	22	Week	24	25	26	27	28	29	Week	31
Mallard	8	5	6	8	7	16	50	10	9	2		2	5	28	
Black	40	9		11	2	16	78	2		5			1	8	
B.w. Teal			6				6		1	3				4	
G.w. Teal						16	16		1		2			3	
Pintail	4	5		3			12				1			1	
Shoveler															
Scaup Sp.									2					2	
Redhead															
Canvasback															
Ruddy Duck			6				6	1	1					2	
Wood Duck															
Baldpate								1		2				3	
Gadwall															
Ring-necked Duck															
Bufflehead															
Merganser Sp.															
							168							51	

Estimated Total Daily Kill by Species Cont'd

November	1	2	3	4	5	Week	7	8	9	10	11	12	Week	14	15	16
Mallard	5				41	46	7						7			20
Black	5				20	25	4						4			7
B.w. Teal																2
G.w. Teal					7	7										
Pintail																
Shoveler																
Scaup Sp.					27	27	4						4			
Redhead					7	7	2						2			
Canvasback																
Ruddy Duck																
Wood Duck																
Baldpate																
Gadwall																
Ring-necked Duck																
Bufflehead																
Merganser Sp.																
						112							17			

Estimated Total Daily Kill by Species Cont'd

November	17	18	19	Week	21	22	23	24	25	26	Week	28	29	30
Mallard	4			24						10	10			3
Black	5	8		20		2	12			25	39			4
B.w. Teal	1			3										
G.w. Teal										5	5			
Pintail														
Shoveler														
Scaup Sp.	5	16		21						15	15			3
Redhead														
Canvasback														
Ruddy Duck	1			1										
Wood Duck														
Baldpate														
Gadwall														
Ring-necked Duck														
Bufflehead	2			2										
Merganser Sp.														
				71							69			

Estimated Total Daily Kill by Species Cont'd

December	1	2	3	Week	5	6	7	8	9	10	Week	12	13	14	15	Week
Mallard				3												
Black				4												
B.w. Teal																
G.w. Teal																
Pintail																
Shoveler																
Scaup Sp.				3												
Redhead																
Canvasback																
Ruddy Duck																
Wood Duck																
Baldpate																
Gadwall																
Ring-necked Duck																
Bufflehead																
Merganser Sp.																
				10												

Total Estimated Kill of Ducks - 1,778

Fur Management

Due to the fire emergency this summer in the northwestern part of the Province fur production returns from the Patricia West and the Patricia Central management districts have not as yet been received. However, estimates on this past years production indicate an overall provincial increase from the 1959-60 season catch. Prices received by the trappers for their pelts were down from the previous season although the demand for Ontario pelts was fairly strong with the exception of wild mink and muskrats.

At the Ontario Trappers' Association Fur Sales Service in North Bay pelt volume increased more than 65% over last season but dollar volume only increased about 25%. Shippers to the sales increased 25% and the prices they received for their fur were higher than those paid by the local dealer in most areas. An increasing interest by the fur trade in the North Bay sales was evident last year by the larger and more representative attendance at the sales. Brokers and buyers from New York, London-England and Winnipeg as well as those from Montreal, Toronto and other Ontario centres attended the sales and indicated their intention of attending the sales again this coming year.

Trapping conditions were generally good throughout the Province with some areas suffering from abnormally heavy ice due to unusually light snowfall in western and northwestern sections.

The overall quality of Ontario fur continues to improve due to better handling techniques and a smaller percentage of spring pelts being taken by the trappers. The Department's programme of instruction for the trappers in handling methods will be continued with special emphasis on standard sizes and shapes of raw pelts.

Ontario pelts were put on display at a number of local fairs and exhibitions throughout the year including the Canadian National Exhibition and the Sportsmans Show in Toronto, the Central Canada Exhibition in Ottawa and several other shows in London, Kitchener, North Bay, Timmins, etc. About sixty typical pelts from Ontario were also sent overseas as part of the Department of Trade and Commerce showing of Canadian fur in Europe and these pelts are now on display in London at Ontario House.

Beaver

The March 31st closing date for trapping was again in effect this year and beaver production increased over 25%. Pelt quality and handling techniques continue to improve.

Fisher

The increase in fisher production again showed a slight gain over last year although the average price received was noticeably lower.

Fox

Fox continue to show signs of increase in most areas.

Lynx

The price received by the trappers for lynx was down from the previous year but production was up slightly.

Marten

The take of marten was up approximately 50% over last year but demand for the pelts continues to be only fair with the average price down slightly from a year ago.

Mink

Production was up again from last year but there was some difficulty encountered in selling this item even at prices about half of those received last year.

Muskrat

Very little improvement in the demand for muskrat was evident this year with a slightly lower average price. Production figures while not yet complete, indicate an increase over last year.

Otter

Otter continued in good demand with prices slightly lower than last year. Production again showed a small increase over last season.

Raccoon, Skunk, Squirrel and Weasel

Populations in most sections do not seem to have varied much from last year and demand for all these items except skunk have shown some improvement. Prices for well handled, seasonable raccoon were in line with those of last year as were squirrel and weasel.

Restocking

Two hundred beaver were live-trapped in the north-central part of the Province and released in underpopulated areas in the Patricia management districts. This was a continuation of the restocking programme commenced three years ago to build up the beaver population that had been reduced by an outbreak of suspected tularemia some years ago. According to recent surveys of the restocked areas the beaver population seems to be recovering and trapping will again be possible in the near future.

Some marten and fisher were live-trapped in central Ontario again this year and released in suitable areas in adjacent districts where local populations were weak.

REVENUE RECEIVED FROM EXPORT PERMITS
JULY 1st, 1960 to JUNE 30th, 1961.

	<u>Total amount of pelts</u>	<u>Total amount of revenue</u>
Beaver	130,167	\$130,167.00
Fisher	3,287	3,287.00
Fox (white)	63	47.25
Lynx	4,409	661.35
Marten	8,323	4,161.50
Mink	57,748	57,748.00
Muskrat	355,103	17,755.15
Otter	7,489	9,361.25
Weasel	20,959	1,047.95
Wolverine	1	.40
Fox (cross)	234	
Fox (red)	2,083	
Fox (silver, black or blue)	25	
Raccoon	18,906	
Skunk	152	
TOTAL REVENUE		\$224,236.85

REVENUE RECEIVED FROM TANNERS PERMITS
JULY 1st, 1960 to JUNE 30th, 1961.

	<u>Total amount of pelts</u>	<u>Total amount of revenue</u>
Beaver	1,453	\$ 1,453.00
Fisher	23	23.00
Fox (white)	11	8.25
Lynx	50	7.50
Marten	542	271.00
Mink	3,980	3,980.00
Muskrat	64,364	3,218.20
Otter	21	26.25
Weasel	592	29.60
Wolverine	-	
Fox (cross)	3	
Fox (red)	649	
Fox (silver, black or blue)	2	
Raccoon	232	
Skunk	7	
		<hr/>
TOTAL REVENUE		\$ 9,016.80 <hr/> <hr/>

STATEMENT OF WILD PELTS EXPORTED OR TANNED
SHOWING NUMBER AND VALUE OF PELTS AND ROYALTY
RECEIVED FROM JULY 1st, 1960 to JUNE 30th, 1961.

	<u>Pelts Exported</u>	<u>Pelts Tanned</u>	<u>Total Pelts</u>	<u>Value of Pelts</u>
Beaver	130,167	1,453	131,620	1,408,334.00
Fisher	3,287	23	3,310	26,480.00
Fox (white)	63	11	74	1,480.00
Lynx	4,409	50	4,459	34,334.30
Marten	8,323	542	8,865	30,584.25
Mink	57,748	3,990	61,728	515,428.80
Muskrat	355,103	64,364	419,467	226,512.18
Otter	7,489	21	7,510	177,987.00
Weasel	20,959	592	21,551	9,697.95
Wolverine	1	-	1	15.00
Fox (cross)	234	3	237	556.95
Fox (red)	2,083	649	2,732	5,737.20
Fox (silver, black or blue)	25	2	27	121.50
Raccoon	18,906	232	19,138	32,534.60
Skunk	152	7	159	71.55
	<u>608,949</u>	<u>71,929</u>	<u>680,878</u>	<u>2,469,875.28</u>

Revenue received from Export Permits -	224,236.85
Revenue received from Tanners Permits -	9,016.80
TOTAL REVENUE -	<u>\$ 233,253.65</u>

**STATEMENT OF RANCH RAISED PELTS EXPORTED OR
TANNED SHOWING NUMBER AND VALUE OF PELTS FROM
JULY 1st, 1960 to JUNE 30th, 1961.**

	<u>Exported</u>	<u>Tanned</u>	<u>Total pelts</u>	<u>Value of pelts</u>
Fox (silver black or blue)	346	64	410	1,640.00
Mink	308,917	39,275	348,192	4,439,448.00
	<u>309,263</u>	<u>39,339</u>	<u>348,602</u>	<u>\$ 4,441,088.00</u>

Pheasant Hunting Preserves

The public interest is steadily increasing in the operation of privately operated pheasant hunting preserves throughout the Province under O.Reg.163/59.

While there was in 1959 a total of 2,286 hunters on twenty-two preserves, in 1960 only 1,777 hunters hunted on thirty-one preserves. This decrease in the total number of hunters on an increase of preserves is due, in the opinion of the operators, to the \$21.00 non-resident hunting licence fee which is required for a non-resident hunting on a privately owned preserve. This factor, along with the operators fee proved to be restrictive where prospective non-resident hunters are concerned.

The following table indicates the activities of the Pheasant Hunting Preserves in the various administrative districts throughout the Province:-

Adminis- trative Districts	Number of Preserves	Total Purchases	Total of Birds Released	Total of Birds Removed by Hunters	Total number of Hunters	Stock Birds on hand March 31, 1961
Aylmer	13	2,859	6,367	3,551	700	3,019
Hespeler	6	8,871	8,703	4,636	394	1,054
Maple	4	1,481	1,717	1,017	304	103
Lindsay	3	698	960	571	119	306
Parry Sound	1	Nil	501	451	106	145
Sudbury	2	72	72	34	13	38
Tweed	1	Nil	3,576	1,976	116	700
Kemptville	1	161	171	80	25	Nil
Total	31	14,142	22,067	12,316	1,777	5,365

Location by Counties of Pheasant Hunting Preserves 1960-1961

Durham.....	1	Northumberland.....	1
Elgin.....	1	Ontario.....	2
Essex.....	2	Oxford.....	1
Grey.....	1	Prince Edward.....	1
Haldimand.....	2	Simcoe.....	1
Kent.....	1	Sudbury.....	1
Lambton.....	1	Victoria.....	1
Lanark.....	1	Waterloo.....	2
Lincoln.....	1	Welland.....	1
Manitoulin.....	1	Wellington.....	1
Middlesex.....	2	Wentworth.....	1
Muskoka.....	1	York.....	1
Norfolk.....	2		
		Total	31

Commercial Pheasant Farms year ending March 31, 1961

The year ending March 31, 1961 completed the fifth year of operations for Commercial Pheasant Farms in the Province of Ontario. The number of licenced farms has steadily increased since the regulations were originally promulgated from 30 farms in 1956 to 155 in 1960.

Sales of eggs, chicks and poults and adult birds were made to operators of Pheasant Hunting Preserves and to individuals who are issued free licences (Form G.203) to propagate pheasants as a hobby. It is interesting to note that, in the case of the latter, 226 licences were issued in the callander year ending December 30, 1960. Some of these hobbyists are potential commercial operators but are not allowed to sell eggs or live birds under the free licence.

The following are the average prices obtained:-

Pheasant eggs during May	-	20.00	to	25.00	per hundred
during June	-	18.00	to	20.00	per hundred
Day old chicks from					
May 15 to June 15	-	40.00	to	50.00	per hundred
June 16 to July 15	-	35.00	to	45.00	per hundred
Poults (7 weeks)					
from June 25, on	-	1.30	to	1.45	each
Mature Birds					
September 1 to November 15	-	Cocks	3.15	to	3.50 each
		Hens	2.75	to	3.00 each
November 16 to January 31	-	Cocks	3.40	to	3.75 each
		Hens	3.00	to	3.25 each
February 1 to May 1	-	Cocks	3.65	to	4.00 each
		Hens	3.25	to	3.50 each
One year old used breeders					
June 15 to July 15	-	Cocks	2.50	each	
		Hens	2.00	each	

Price ranges shown above were governed by the quantity purchased.

Cry-O-Vac packed dressed birds	-	Cocks	5.00
		Hens	4.00

There were discounts given on quantity purchased.

Location by Counties of Commercial Pheasant Farms

Algoma.....	1	Norfolk.....	7
Bruce.....	2	Northumberland.....	4
Carleton.....	2	Ontario.....	9
Durham.....	5	Oxford.....	9
Elgin.....	4	Peel.....	6
Essex.....	3	P Perth.....	2
Frontenac.....	1	Peterborough.....	1
Grey.....	4	Prince Edward.....	2
Haldimand.....	3	Renfrew.....	1
Halton.....	6	Russell.....	1
Hastings.....	1	Simcoe.....	2
Huron.....	6	Sudbury.....	2
Kent.....	5	Victoria.....	2
Lambton.....	5	Waterloo.....	8
Lanark.....	2	Welland.....	9
Lincoln.....	6	Wellington.....	7
Manitoulin.....	1	Wentworth.....	7
Middlesex.....	4	York.....	14
Muskoka.....	1		
		Total	155

A Table indicating the activities of the Commercial Pheasant Farms for the year ending March 31st, 1961, in the various administrative districts.

Administrative District	Number of Farms	<u>Purchases</u>			<u>Sales</u>					Stock on Hand as of March 31, 1961.
		Eggs	Chicks and Poult	Adults	Dressed Birds	Eggs	Chicks and Poult	Live Adult Birds		
Aylmer	46	110	4,169	435	3,553	5,243	15,815	4,405	3,627	
Hespeler	52	1146	8,317	364	6,648	885	657	3,038	2,187	
Kemptville	5	Nil	200	12	15	Nil	Nil	171	15	
Maple	30	2750	995	235	3,087	1,470	392	722	966	
Lindsay	12	1000	575	175	1,091	1,036	700	837	368	
Parry Sound	1	Nil	Nil	106	12	95	1,894	514	145	
Sault Ste. Marie	1	Nil	100	10	Nil	Nil	Nil	Nil	90	
Sudbury	3	Nil	100	Nil	871	Nil	100	375	195	
Tweed	5	Nil	Nil	10	1,540	Nil	48	27	764	
Total	155	5006	14,456	1,347	16,817	8,729	19,606	10,089	8,357	

FUR FARMING
1960.

Early predictions of lower price levels for the 1960 crop of ordinary quality Standard, Pastel and White mink, proved accurate as the first sales of the season recorded declines of 20% for Standards and Pastels and little to no interest shown for White mink, which were mostly withdrawn. Due to the uncertainty in the market, turnover on early sales was running 50 to 60%.

A number of reasons are given as contributing factors to the decline. However, the two which we feel are the main reasons, were the placing of thousands of mink on the Scandinavian market early in the season, without price reserves. This was done in an attempt to attract as many foreign buyers as possible to the Scandinavian Auction Sales. The second reason would appear to be the decline in the volume of fur business experienced by the dealers, manufacturers and the retailers in the latter part of 1960, which resulted in losses on inventory costs.

The decline increased on the above types through to April, when a 35% to 40% decline was recorded. Meanwhile Sapphires, Aleutians, Pearls and Palominos, together with the newer Types,- Lavenders, Violets, Orchids and Hopes, sold to good advantage at firm prices.

In May, the market showed definite signs of improvement when it became obvious to the buyers that the "low" had been reached and they would not be caught buying on a declining market. Large quantities of mink then changed hands and sales recorded 85-90 and 100% turnover.

Select quality Extra-dark Standard mink was in good demand throughout most sales. Ranchers producing mink of mediocre to fair quality, must improve their quality if they wish to continue in the business and make a profit. It is estimated that world production of mink is 12,000,000 pelts annually and the sales of this past season indicate that the buyers have such a large volume from which to choose, that they are

not prepared to pay prices for average to poor quality from which ranchers raising this calibre, could make a profit.

As of July 1st., 1960, Canada Mink Breeders launched their own programme of advertising and marketing members' pelts independently of EMBA. The agreement with EMBA expired June 30th and it had been mutually agreed previously, not to renew it. CMB has registered as a trademark the name "Canada Majestic Mink" under which members' pelts will be advertised and sold.

A comprehensive campaign was undertaken to announce the separation from EMBA and the independence of CMB to the Fur Trade, both in Canada and the United States and in the European fur centres. The announcements were made for the most part at Trade Fairs and Fashion Shows, held in co-operation with the Canadian Embassy in the various countries.

High standards of quality have been established and all members' pelts are to be graded to ensure that only pelts which meet these standards of quality, will be eligible for the CMB stamp and label and may be sold under the trademark name at CMB Exclusive Sales, or CMB Sales.

The Ontario Fur Breeders' Association which forms a large and influential segment of Canada Mink Breeders, can be justly proud of the important contribution it made to the national organization in formulating and launching the present programme.

There were 14 reported cases of distemper on ranches during the year. The losses for the most part were small, with the exception of one case where a 24.2% loss was sustained. Preventative vaccination against distemper, virus enteritis and botulism is undertaken by an increasing number of ranchers, which holds the incident of disease down. The use of Diethylstilbestrol in production of poultry, parts of which are used as mink feeds, has been withdrawn by the Federal Government. Deaths and losses of production due to the effects of this drug, should henceforth be eliminated.

A total of 500 licences were issued in 1960. 444 were renewals, 51 were new and 5 licences were issued with retroactive provisions, to legalize the operations of an unlicensed ranch during the previous year.

The following table shows the number and location by county and District, of fur farms for 1960.

<u>County or District</u>	<u>Number</u>
Algoma	1
Brant	9
Bruce	21
Dufferin	3
Durham	8
Elgin	7
Essex	10
Frontenac	4
Grenville	1
Grey	28
Haldimand	11
Halton	20
Huron	10
Kenora	7
Kent	13
Lambton	4
Lanark	6
Leeds	2
Lincoln	23
Manitoulin	6
Muskoka	2
Middlesex	19
Nipissing	3
Norfolk	9
Northumberland	1
Ontario	13
Oxford	18
Parry Sound	7
Peel	5
Perth	44
Peterborough	1
Rainy River	3
Renfrew	1
Simcoe	31
Thunder Bay	12
Victoria	3
Waterloo	21
Welland	17
Wellington	34
Wentworth	30
York	32
<hr/>	
TOTAL	500

SUMMARY OF BREEDING STOCK
Licensed Fur Farms
January 1st.

	1956	1957	1958	1959	1960
<u>OTHER ANIMALS</u>					
Beaver(Pens)	1	1	1	1	1
Beaver(S.C.)	0	0	0	0	0
Fisher	12	12	8	2	2
Marten	81	85	76	89	96
Muskrat(Pens)	2	24	2	0	0
Muskrat(S.C.)	60	30	45	0	0
Raccoon	43	43	33	24	22
Skunk	5	5	3	3	3
<u>FOX</u>					
Blue	81	56	57	83	94
Cross	1	1	0	0	0
Red	6	7	X12	X13	X14
Standard Silver	239	166	// 150	// 178	// 292
Platinum	108	105	# 186	# 232	# 280
Pearl Platinum	155	119	0	0	0
White Marked	9	6	0	0	0
<u>MINK</u>					
Standard & dark					
half-blood	20841	14812	0	0	0
Silverblu	21125	24072	0	0	0
Pastel	40368	42063	0	0	0
Other Mink	19387	28989	*119299	*130294	*142600
X Includes Cross and White Fox					
# Includes Pearl Platinum Fox					
// Includes White Marked Fox					
* Includes All Types of Mink					

COLOUR TYPE OF PELTS TAKEN FROM MINK DURING 1960.

DARK AND HALF BLOOD DARK MINK, include Blufrost	55,504
GREY TYPE such as Silverblu or Platinum, Sage, B.O.S., Stewarts & Homos	15,525
DARK BLUE TYPE such as Aleutian, Blue Iris, Steelblu, B.O.S., Stewarts & Homos	19,165
LIGHT BLUE TYPE such as Sapphire, Winterblu, Eric, Violet, B.O.S., Stewarts & Homos	38,640
BROWN TYPE such as Pastel, Topaz, Ambergold, Buff, B.O.S., Stewarts & Homos	190,926
BEIGE TYPE such as Palomino, Pearl, Lavender, Hope, B.O.S., Stewarts & Homos	16,101
WHITE TYPE, include 95% White	<u>12,619</u>
TOTAL PELTS -	348,480

FISH AND WILDLIFE BRANCH.

WOLF BOUNTY

1960 - 1961.

The Wolf and Bear Bounty Act authorizes the payment of a \$25.00 bounty on a timber or brush wolf 3 months of age or over, and a \$15.00 bounty on a timber or brush wolf under 3 months of age.

On wolves killed in the provisional judicial districts, the Department pays the whole bounty, whereas on wolves killed in the counties, the Department pays 40% of the bounty and the respective county pays the remaining 60%.

The whole pelt of the wolf must be presented as evidence, on wolves killed in the counties and the Provisional Judicial District of Manitoulin. However, the whole unskinned head of the wolf may be presented in lieu of the whole pelt on wolves killed in the provisional judicial districts, excepting Manitoulin.

The following table shows the number and species of wolves killed and the amount of bounty paid during the past five years.

PERIOD	TIMBER	BRUSH	PUPS	TOTAL	BOUNTY
For year ending Mar.31,1957	1195	486	71	1752	\$38,950.00
For year ending Mar.31,1958	1047	574	34	1655	\$37,255.00
For year ending Mar.31,1959	1169	606	49	1824	\$41,589.00
For year ending Mar.31,1960	939	528	42	1509	\$33,619.00
For year ending Mar.31,1961	1320	761	57	2138	#\$48,766.00

The \$25.00 difference in this figure and that shown by the Accounts Branch, is due to the return of bounty on a wolf illegally taken in the previous fiscal year and which was received by Accounts Branch during this fiscal year but was not posted to the Consolidated Revenue Fund.

The Department considered 1,510 claims for bounty on 2,081 wolves and 57 pups. 8 claims, representing 4 wolves, 1 pup and

4 dogs, were refused for various reasons.

There was a 46.8% increase in the number of wolves taken in the districts and a 14.1% increase in the number of wolves taken in the counties, or a 41.6% increase in the total wolf kill this year, as compared with the total for the last fiscal year.

The Wolf Research Project continued throughout the past fiscal year in co-operation with the Research Branch. A Progress Report on this project may be found in that Branch's section of the Annual Report.

The following table shows the number of wolves killed by county and district, on which claims for bounty were received.

COUNTY	TIMBER	BRUSH	PUPS	TOTAL
Brant		2		2
Bruce		12		12
Carleton		5		5
Durham		5		5
Elgin		1		1
Essex		1		1
Frontenac	3	14		17
Grey		4		4
Haldimand		5	5	10
Hastings	10	14	6	30
Huron		1		1
Kent		4	4	8
Lambton		2		2
Lanark		10		10
Leeds & Grenville		3		3
Lennox & Add.	2	8		10
Northumberland		16		16
Ontario		1		1
Peterborough	17	2		19
Prince Edward		2		2
Renfrew	53	36		89
Simcoe	1	10		11
Victoria		5		5
Welland		9	1	10

TOTAL FOR COUNTIES	86	172	16	274
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DISTRICT	TIMBER	BRUSH	PUPS	TOTAL
Algoma	119	86		205
Cochrane	137	1	11	149
Haliburton	17			17
Kenora	232	58	1	291
Manitoulin	14	201	7	222
Muskoka	10	17		27
Nipissing	151	31	3	185
Parry Sound	94	33	10	137
Rainy River	29	64		93
Sudbury	236	62	5	303
Timiskaming	40	2	3	45
Thunder Bay	155	34	1	190

TOTAL FOR DISTRICTS	1234	589	41	1864
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TOTAL FOR COUNTIES	86	172	16	274
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<u>GRAND TOTAL</u>	1320	761	57	2138
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FISH AND WILDLIFE BRANCH.

BEAR BOUNTY

1960 - 1961.

The Wolf and Bear Bounty Act provides for the payment of a bounty on bear to help control the population of this species. A \$10.00 bounty is paid on a bear 12 months of age or over and a \$5.00 bounty is paid on a bear under 12 months of age.

Bounty is paid only on bears that are killed in defence or preservation of livestock or property by a bona fide resident of the township in which it is killed. The township must be located in one of the districts or counties specified in the Regulations and must have 25% of its total area devoted to agriculture. The Act also specifies that the whole pelt of the bear must be presented within three weeks of the date of killing, before a Magistrate, Justice of the Peace, Conservation Officer or a duly appointed Bear Bounty Officer.

The following table shows the number of bears and cubs killed, on which claims for bounty were received and the amounts of bounty paid during the past five years.

PERIOD	ADULTS	CUBS	BOUNTY
For year ending Mar.31,1957	611	50	\$ 6,225.00
For year ending Mar.31,1958	1568	300	\$16,930.00
For year ending Mar.31,1959	1084	116	\$11,145.00
For year ending Mar.31,1960	697	139	\$ 7,590.00
For year ending Mar.31,1961	401	46	\$ 4,150.00

The Department considered 355 claims representing 401 bears and 46 cubs. 7 claims representing 9 bears were refused for various reasons.

It appears that the unusually heavy kill in the Kenora (including Patricia Portion) and the Rainy River Districts in

1958 and 1959, has cut into the foundation breeding stock of the area, which has resulted in another light kill in these Districts this year. The total number of bears bountied this year is less than any year since 1952, which is indicative that the low in the bear cycle has been reached this year.

The following table shows the number of bears killed in each county and district on which claims for bounty were received. These figures are exclusive of the number of bears killed by sportsmen, on which bounty is not applicable.

County or District	Bear 12 months or over	Cubs under 12 months
Algoma	22	4
Bruce	1	0
Cochrane	72	7
Frontenac	3	0
Haliburton	6	2
Hastings	20	0
Kenora	4	2
Lanark	7	2
Lennox & Add.	2	0
Manitoulin	1	4
Muskoka	5	0
Nipissing	29	2
Northumberland	1	0
Parry Sound	44	6
Peterborough	11	0
Rainy River	30	6
Renfrew	28	1
Sudbury	54	5
Timiskaming	29	2
Thunder Bay	32	3
TOTAL -	401	46

FIELD SERVICES

The Field Services Section is responsible for the overall work program of the conservation officers. More specifically, the section is concerned with laws and regulations essential to the wildlife management program, instruction of Department personnel, but chiefly conservation officers in law enforcement, maintenance of law enforcement and seizures records, disposal of seized articles, and the hunter safety training program.

The program of management of the wildlife resources of Ontario is directed towards full utilization of the fish, game and fur which is available. Since, with many fish and game species, only a fraction of the annual production is used, it follows that laws and regulations should not be unnecessarily restrictive. Thus, the primary consideration in regulating the harvest of wildlife is to provide as great an opportunity as possible for our citizens to enjoy this form of outdoor recreation. Biologists now realize that most wild animals and fish can readily sustain themselves if the habitat is suitable. Modern lawmaking recognizes this. Fish and game regulations must be subject to constant study and frequent revision. In general, they (a) provide for wider distribution of the crop by using bag limits to restrict the numbers that an individual angler or hunter may take, (b) insure continuing production by protecting parent stock at certain times, particularly when they may be more vulnerable to capture, and (c) recognize the fact that fishing and hunting pursuits may interfere with the enjoyment or privileges of others, and therefore methods and times may be restricted.

During this fiscal year, certain important amendments were made to The Game and Fisheries Act, including

- (a) provision for the purchase of land for the conservation, management and propagation of fish and wildlife resources,
- (b) inclusion of polar bears and black bears in the list of game animals,
- (c) provision for party hunting of moose,

(d) provision of a license to permit the rearing and sale of certain game fish, and

(e) provision of a section which provides for the offence of careless hunting.

A major responsibility of the Field Services Section is to study the results of legal actions initiated by the conservation officer staff and those who assist them, with a view to reducing the number of infractions.

The results of actions by conservation officers in the fiscal year 1960-61 are as follows:

Number of seizures	2,424
Number of convictions	2,160
Number of cases dismissed	126
Seizures from persons unknown	139
Seizures made, no action taken	6
Convictions reported by the R.C.M.P. in respect of offences against Migratory Bird Regulations	47

The total number of seizures and total number of cases dealt with do not correspond since convictions may be registered for more than one offence in connection with a single seizure, or may be registered when no seizure is made at all.

Of 2,160 convictions obtained, 681 (31.8%) were for hunting, fishing or trapping without a license, or for transferring a license. License offences may be grouped as follows:

Fishing without a license	183
Hunting without a license	482
Trapping without a license	16

Residents of Ontario do not require an angling license unless they are fishing in Algonquin, Superior or Quetico Parks. Only 5 offences were recorded for failure to have a park angling license, while 129 occurred when non-residents failed to provide themselves with an angling license. Most of these offences occur in border waters; with the Lake Erie and Kemptville Districts having most cases.

Most of the hunting and trapping offences of failing to have a license are committed by residents of Ontario.

Officers of the Department consider the offence of hunting or fishing without a license to be a serious one, since it means that a few irresponsible people wish to enjoy the benefits of wildlife management which has been paid for essentially by the law abiding sportsmen.

Other frequent offences related to fishing include:

1. Angling with more than one line	127
2. Possessing an overlimit of fish	119
3. Taking fish by means other than angling	93
4. Possess fish in closed season	72
5. Attempting to take fish by set lines	38
6. Taking fish during a closed season	29
7. Possessing a fish spear within 50 feet of the waters edge, during prohibited hours	24
8. Angling in a fish sanctuary	17
9. Non-resident exporting fish which were cut up so that species or number of fish could not be determined	16
10. Possess nets without a license	10

Hunting and trapping offences of frequent occurrence include:

1. (a) Possession of a loaded firearm in a car	274
(b) Possession of a loaded firearm in a power boat	29
2. Hunting or possessing firearms in prohibited hours (Sundays or at night)	230
3. Possessing game in closed season	70
4. Hunting with a shotgun, not plugged so as to not hold more than three cartridges	70
5. Hunting or possessing firearms in a Crown Game Preserve or Provincial Park	41
6. Hunting during closed seasons	34
7. Possessing unsealed pelts of fur-bearing animals	9

Carrying firearms in automobiles and power boats is dangerous and has resulted in several fatal accidents through the years. Most of the other offences reflect in some measure the desire of a few individuals to gain an advantage over other sportsmen, and in this sense is an expression of greed. Conservation officers endeavour to apprehend as many violators as possible. The co-operation of citizens, particularly those who enjoy the out-of-doors, in censuring unethical behaviour could do much to reduce the number of violations. The conservation officer is specifically enjoined to prosecute every person whom he has reasonable cause to believe is guilty of an offence against The Game and Fisheries Act. Most officers appraise the circumstances at the time, and if there is reason to believe the offender had no knowledge he was committing an offence, they will issue a warning with an explanation for that particular part of the law. Enforcement is thus understood to be all of the means used to encourage people to observe and understand the fish and game laws. The ultimate step, is, of course, a court action resulting in fine or imprisonment if the defendant is guilty.

While originally, conservation officers, or game wardens as they were called many years ago, were concerned chiefly with law enforcement, modern concepts of wildlife management require that such officers will participate in the biological aspects of the job as well. Thus, it is expected that they will gather inventory information concerning stocks of fish and game, the intensity of use made of resources by sportsmen, conduct surveys of fish and game habitats, explain Department policies to the public and report on public attitudes to the Department, assist in the fish and game stocking program, and in general, participate in practically every phase of wildlife management.

In this important work, the 225 full time conservation officers of the Department are assisted by more than 1,250 volunteer assistants who are designated as Deputy Game and Fishery Wardens. In addition, 185 officers of the Department, charged with other major responsibilities carry conservation officer appointments and badges, and offer assistance in management work including law enforcement.

Officers of the Ontario Provincial Police force work co-operatively with conservation officers to the advantage of both organizations. The Royal Canadian Mounted Police assist in enforcing the provisions of the Migratory Birds Convention Act, a federal statute.

When an offence is committed against The Game and Fisheries Act, or The Ontario Fisheries Regulations, all equipment used by the accused is subject to seizure and upon conviction becomes the property of the Crown. If an article is not in itself an illegal device, (for example a gillnet in the hands of an unlicensed person) it may be sold back to the accused. When serious offences have been committed, the equipment may be permanently confiscated, and along with unclaimed articles, sold in public at auction.

During 1960-61, 11 auction sales were held at different points in Ontario, and a total of almost \$9,700.00 was realized and paid to the Treasurer of Ontario.

Fishing Tackle Sales.

<u>Location</u>	<u>Date</u>	<u>Revenue</u>	
Aylmer	April 23	\$ 503.25	
Hespeler	April 25	597.40	
Kemptville	April 9	359.75	
Sault Ste. Marie	April 18	251.80	
Lindsay	April 21	434.25	
Kenora	April 27	<u>246.50</u>	
			\$2,392.95

Firearms Sales.

<u>Location</u>	<u>Date</u>	<u>Revenue</u>	
Hespeler	Sept. 10	\$1,233.50	
Maple	Sept. 17	1,498.50	
Cochrane	Sept. 10	1,595.80	
Port Arthur	Sept. 9	1,495.00	
Lindsay	Sept. 17	<u>1,482.65</u>	
			<u>\$7,305.45</u>

Total Revenue from Sales 1960-61	<u>\$9,698.40</u>
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A very wide range of equipment is found among the seizures, including angling equipment, nets, traps, snares, firearms, lights, boats and outboard motors, minnow pails, fish, game, pelts and hides, ferrets, minnows, snowshoes, coolers,

and motor vehicles. A total of 13 automobiles seized during the year illustrates the degree of risk to which some poachers will go, since seizures of major equipment are not usually made unless the nature of the offence is such as to demonstrate clearly that it was premeditated.

HUNTER SAFETY TRAINING PROGRAM

In Ontario, in the calendar year 1960, there was a total of 154 hunting accidents, with 36 of them being fatal. The reports on these accidents showed that nearly all happened through carelessness and failure to observe the common sense safety rules, although in a number of cases carelessness accompanied a violation of the hunting regulations. This emphasizes only too clearly the continuing need of the Hunter Safety Training Course, with which is included a few basic facts concerning wildlife management.

Prior to 1959 our hunting accident records showed an annual average of 71, over a five year period, though not all accidents were reported. In 1959, this figure increased to 88 due to more efficient methods of collecting reports. Since 1959, the Ontario Provincial Police have notified us of all gun accidents coming to their attention. These, along with the reports of the conservation officers now give us virtually 100% coverage. The increase to 154 in 1960, however, appears to be a real one as compared to the previous year, and not simply a matter of improved recording. This shocking toll is a matter of great concern to all officers of the Department.

Disregard for the game laws has produced a disturbingly high number of our hunting accidents. About 12% of the shooters involved in accidents were contravening one or another of the laws and regulations. Of these shooters, 14 had charges laid against them. In addition there were 15 youngsters, too young to hold a license, involved in shootings but on account of their age were not charged.

The last three years has been a period in which the training program has gradually been built up. It has been compulsory since September 1, 1960, for all first time hunters to take the safe gun handling course. To date some 15,650 persons have successfully completed the courses, which are largely being conducted by the sportsmen's organizations across the Province.

Ontario again won an Award of Merit presented annually by the National Rifle Association for outstanding achievement in the field of Hunter Safety Training during 1960 as determined by a special committee of the International Association of Game, Fish and Conservation Commissioners. This partly demonstrates the position Hunter Training holds in the broad over-all game management endeavour. Further, the Hunter Training Program provides a good opportunity of practical value both to various organizations and the individual members. As new members are recruited, they can be brought into contact with other clubs, and, of course, with Department officers, thereby broadening their concept of management.

While hunting continues to be an extremely safe sport, injuries and fatalities demand serious attention because they can and should be avoided. The hunting season is a time for relaxation and pleasure to the half million hunter-sportsmen of Ontario. It is also a time for sportsmen to demonstrate by example that hunting is a safe and wholesome form of recreation.

The future of hunting in Ontario demands that all hunter-sportsmen going afield practise the essentials of safe hunting.

FISHERIES SECTION

GAME FISH AND HATCHERIES SUB-SECTION

Public interest in sport fishing in Ontario continued to increase in 1960. District reports from throughout the Province indicated a general increase in the number of anglers and in the resulting fishing pressure in most areas.

Although the total number of resident anglers is not known (resident angling licenses are not required in Ontario, except in Provincial Parks) it is estimated that some 1,750,000 anglers fished in the Province in 1960. This figure is based on the result obtained from a household survey conducted for the Department in 1959, which revealed that more than 1,250,000 residents fished in the Province in that year. It is also based on the current increase in the number of anglers reported from field observations and on the increased sale of non-resident and resident Provincial Park fishing licenses during the current year.

This year a record total of 416,755 non-resident and resident Provincial Park fishing licenses were sold in the Province for a gross revenue of \$2,435,611.47. The largest increase in sales was for non-resident licenses which rose from 389,811 in 1959 to 396,213 in 1960, an increase of 6,402 licenses. Complete details of all fishing license sales for 1960 together with the comparable annual records for the previous three years are given in Table 1.

Much of the increased interest in the sport fishery in Ontario is attributed largely to our growing population, to the current trend for greater participation in outdoor recreation, and to the improved facilities and access which have been made available in the Province in recent years. In southern Ontario fishing pressure on most of the public waters is increasing steadily. This trend is illustrated in the following Table 2. which describes the results of an aerial survey study which was conducted on a number of waters in the Lake Simcoe District during the period 1957 to 1960.

In northern Ontario increased fishing pressure is also evident. However, in this area much of the increased activity is more widely distributed. The opening of extensive new fishing areas resulting from the construction of new and improved highways and access roads has attracted many anglers to more of the remote areas.

The resulting effect has therefore been a general expansion of the overall fishery with much of the increased pressure being spread over a more extensive area.

Winter ice fishing is an integral part of the sport fishery in Ontario which is also gaining rapidly in popularity. This fishery which was mainly confined to a few areas in southern Ontario a few years ago now forms a very significant part of the sport fishery in many areas of the Province. The key centers of activity are still located on Lake Simcoe and on Lake Erie and connecting Great Lakes waters, but increased interest and development in the sport is evident in the Fort Frances, Kenora, Sault Ste. Marie, Sudbury and North Bay Districts. Reports received from the Kemptville, Tweed and Lindsay Districts, where winter fishing seasons have only recently been provided, also indicate considerable interest and activity in the sport.

The fisheries management program which was undertaken in Ontario in 1960 was essentially similar to the work which was carried out in previous years. Particular emphasis was again placed on the need for the collection of fundamental information on the quality of waters and the fish populations contained therein, and on the condition of the existing fisheries. Lake and stream surveys, fish population studies and creel census studies were conducted extensively in each of the 22 forest districts. In addition considerable attention was directed to the distribution and planting of hatchery reared fish and to investigation of a number of special projects which were undertaken in various areas of the Province.

Hatcheries

Twenty-one fish hatcheries were operated by the Department in 1960. These included eight rearing stations, eight pond stations (including one sub-station at Ingersoll) and five trough or jar hatcheries.

Most of the hatcheries were operated at, or near maximum capacity. However, two of the trout rearing stations at Chatsworth and Normandale were under re-construction and the production at these sites was greatly reduced. The operations of the jar hatchery at Kingsville and the pond station at Mount Pleasant were also curtailed mainly because of the deterioration in the respective water supplies and, in the case of Kingsville Hatchery, because of the lack of supply of suitable egg stocks.

The total distribution of hatchery reared fish planted in 1960 together with the planting records for the previous four years is tabulated by species and by age group in Table 3. It is noted that the larger production and planting of smallmouth and largemouth black bass fry and fingerling, and pickerel and whitefish eyed eggs and fry was due mainly to the successful collection and culture of these species rather than any planned expansion of the hatchery program. The reduced production and planting of trout yearlings was due primarily to the temporary reduction in facilities at the Chatsworth and Normandale trout rearing stations. However, the current practice of the Department to produce larger size fish also had an influencing affect, limiting the total number of trout which can be produced in the available facilities.

This year one hundred thousand lake trout eyed eggs were obtained from the Manitoba Provincial Government in exchange for an equal number of speckled trout eyed eggs which were supplied from the Dorion trout rearing station. The exchange was arranged by the Department when extreme low water conditions resulted in a poor collection of lake trout spawn from Big Trout Lake in the Patricia District. The transfer of each lot of eggs was a complete success and the resulting stock in each case is reported to be in excellent condition.

The lake trout rehabilitation program for Lake Superior was continued in 1960. This year an estimated total of 445,891 hatchery reared lake trout, including 50,250 fingerling and 395,641 yearling size fish were marked and planted in Lake Superior. The fingerling trout which were produced at the Port Arthur hatchery were marked by the removal of the right and left pectoral fins and planted in the vicinity of Pie Island, located at the mouth of Thunder Bay. The yearling stock was produced at the Dorion and Tarentorus trout rearing stations. Approximately 265,641 fish from the Dorion station were marked by the removal of the right pectoral fin and planted in the Rossport - St. Ignace Island area. The remainder of the stock, estimated at 130,000 fish, was marked by the removal of the adipose and left pectoral fins. These fish were planted in the vicinity of the Agawa Rocks from the Tarentorus station.

Special Projects

1. Netting Operations

Seven major trap netting operations were undertaken by the Department in 1960. These included operations conducted on Lake Timagami (North Bay District), Kashagawigamog Lake (Lindsay District), Little Rideau Lake (Kemptonville District), Grass Lake (Lindsay District), Canning Lake (Lindsay District), Shadow Lake (Lindsay District) and Lac Seul (Sioux Lookout District).

All of these projects with the exception of the operation on Lac Seul were conducted primarily to obtain large samples of fish for examination (age and growth studies) and for tagging or marking and release for subsequent population studies. The project on Lac Seul was undertaken to determine the effectiveness of deepwater impounding gear for possible future use by licensed commercial fishermen operating on Lac Seul. The number of fish harvested during each of these operations is recorded in Table 4.

2. Patricia Inventory Project

This project was initiated in 1959 to obtain factual information on the fisheries resource in the Patricia area of northern Ontario for use in the management of the existing commercial and sport fisheries and for planning the future development and utilization of the resource in the area.

During 1959 and 1960 comprehensive lake surveys and fish population studies were undertaken on Deer Lake, North Caribou Lake, Big Trout Lake and Hawley Lakes, and a preliminary study was made on the speckled trout fishery in the Sutton River. In 1960 water samples were also obtained from an additional 26 lakes in the Patricia area for chemical analyses. Although all of these studies are still in progress much valuable information has already been obtained on the physical and chemical qualities of the waters examined and on the characteristics of the respective fish populations. For example, it is apparent from results obtained to date that the lakes in the Patricia area of northern Ontario are relatively less productive than comparable western lakes located in the same latitude. It is also evident that the growth rates for most species of fish inhabiting the lakes in northern Ontario are considerably slower than in more southern lakes. Both of these factors are basic considerations to management and, while it is recognized that more pertinent data are required before properly detailed plans can be formulated, the information at

hand is still particularly useful for immediate application in dealing with the existing fisheries in the area.

3. Stokes Bay Bass Project

In 1951, four fish sanctuaries, covering almost the entire western shore of the Bruce Peninsula, were established for the protection of the smallmouth bass population during the month of June. This extensive closed area greatly restricts the sport fishing activity for tourist operators, cottages, and private fishing clubs, especially in the Stokes Bay area. The current project was undertaken to study the smallmouth bass fishery in the Stokes Bay area and to recommend an appropriate management program.

Results from the study are incomplete. It is expected that two or three years of intensive investigation will be required before any definite conclusion can be reached. However, during the first year of study considerable information was obtained on the age, growth and maturity of the smallmouth bass. Approximately 5,000 smallmouth bass were tagged and released during the year. Returns from these operations also provided preliminary data on the distribution and abundance of the species in the area.

Regulations

A number of important amendments were made to the Ontario Fishery Regulations in 1960. The most significant changes affecting the sport fish species were as follows:

1. The removal of the seven inch size limit on speckled trout, rainbow trout, brown trout and aurora trout.
2. The reduced creel limit for lake trout taken in Lake Timagami and southern Ontario (excluding the French and Mattawa Rivers, Lake Nipissing, the Great Lakes and connecting waters and the St. Lawrence River) from five to three in one day.
3. The extension of the open seasons for angling for yellow walleye from May 23rd to May 15th for the area north and west of and excluding the French and Mattawa Rivers and Lake Nipissing, and from December 31st to March 31st for the area south of and including the French and Mattawa Rivers and Lake Nipissing.

TABLE 1
SALE OF ANGLING LICENCES

Type of Licence	1957		1958		1959		1960	
	Quantity	\$Revenue	Quantity	\$Revenue	Quantity	\$Revenue	Quantity	\$Revenue
Non-Resident	397,435	2,389,614.00	380,036	2,280,288.00	389,811	2,340,369.00	396,213	2,378,783.47
Organized Camp	4,219	8,438.00	5,381	10,762.00	5,487	10,974.00	4,893	9,786.00
Manitoba	4,109	12,328.00	4,831	14,492.00	4,849	14,748.00	5,133	15,600.25
Provincial Park	6,683	20,801.00	7,658	31,075.00	10,739	32,591.00	10,275	31,200.75
Provincial Park Jr.	795	795.00	808	808.00	930	930.00	241	241.00
Total Revenue	\$2,431,976.00		\$2,337,425.00		\$2,399,612.00		\$2,435,611.47	

TABLE 2

AERIAL SURVEYS FOR THE ASSESSMENT OF ANGLING ACTIVITY
IN THE LAKE SIMCOE DISTRICT

NAME OF WATERS	AVERAGE NUMBER OF BOATS PER FLIGHT			
	1957	1958	1959	1960
Lake Simcoe	206.2	309.7	413	484
Lake Couchiching	34.2	53	65.3	52
Severn River, Sparrow Lake to Hydro Glen	42.7	36	58.1	56.2
Hydro Glen to Big Chute	14.5	16.1	25.2	23
Six Mile Lake	14.1	22.1	28.8	34.3
Beausoleil Is. to Christian Island			26.3	19
Christian Is. to Collingwood			28.2	27.3
Nottawasaga River			30.8	38.3
Little Lake			26.2	34
Lake St. John			13.8	19.6
Bass Lake			11.6	15.4

TABLE 3

Fish Distribution from 1956 to 1960

SPECIES OF FISH	NUMBER OF FISH PLANTED				
	1956	1957	1958	1959	1960
Black Bass, Largemouth Fry	360,000	190,000	46,000	45,000	230,550
Fingerling	121,630	128,830	62,600	46,500	29,500
Yearling and Adult	1,495	2,922	1,035	144	20
Black Bass, Smallmouth Fry	803,000	467,500	130,000	89,000	156,000
Fingerling	368,500	131,700	132,750	227,200	177,600
Yearling and Adult	19,336	665	4,468	499	510
Bluegills Fingerling	12	-	-	-	-
Char, French Alpine Fingerling	21,026	-	-	-	-
Yearling	-	-	2,400	-	-
Adult	-	-	5,330	-	345
Herring Eggs	-	1,840,000	-	1,067,750	-
Fry	350,000	-	-	-	50,000
Maskinonge Fry	3,610,000	2,430,000	2,940,000	4,070,000	3,390,000
Fingerling	73,524	38,575	17,512	50,450	51,405
Adult	86	923	501	-	-
Ouananiche Eggs	-	10,800	-	-	-
Fingerling	1,340	-	-	-	-
Adult	-	-	-	-	660
Pickereel Eggs	138,805,000	90,565,000	56,245,000	30,875,000	53,790,000
Fry	-	-	-	3,040,000	3,600,000
Fingerling	-	3,300	280	-	-
Adult	-	93	400	-	-
Salmon, Kokanee Yearling	-	-	-	-	250

TABLE 4

LAKE SURVEY AND NETTING PROJECTS - 1960

SPECIES OF FISH HARVESTED	P R O J E C T S						
	LAKE TEMAGAMI	KASHAGAWIGAMOG LAKE	LITTLE RIDEAU LAKE	GRASS LAKE	CANNING LAKE	SHADOW LAKE	LAC SEUL
Lake Trout	737	15	1				1,175
Whitefish	1,310	188	33	2			145
Herring	35		1				1,119
Northern Pike	36		331				
Maskinonge						26	
Pickrel	4,008		2,398			12 Y	994
Smallmouth Bass	385	727	138	106	118	298	
Largemouth Bass		336	1,350	458	2	118	
Sucker	4,671	514	298	58	23	152	1,335
Bullhead		526	680 lbs.	435	51	91	
Ling	19	100	12			6	420
Perch		62	366	2			2
Sunfish	8	317	10,501 lbs.	192	13	1,376	
Rock Bass			71			1,066	2
Crappie	347		1,474				
Carp						83	
Golden Shiner				10		2	
Mullet		1		1			
Eel			22				
Blue Pickerel			2				
Speckled Trout	1						

THE COMMERCIAL FISHERY

A total of 47,397,257 pounds of fish was taken by the Ontario commercial fishermen during the year from January 1st to December 31st, 1960. This is below the amount taken the year previously by 3.3% or 1,595,086 pounds. Continuing the trend of the last four years, however, the 1960 catch was again greater than the average for the last ten years by about one and a quarter million pounds or 2.7%.

During the year some Ontario fishermen, under the authority of licences issued by the State of Michigan, fished in the United States waters of Lake Huron. The total of this catch which was landed at Ontario ports amounted to over 200,000 pounds, consisting of 198,820 pounds of chubs and 9,860 pounds of whitefish. The actual landings in Ontario therefore, exceeded the catch in Provincial waters by this amount.

Although the total catch of fish in 1960 was somewhat less than that in 1959, the landed value increased by 1.4% or \$66,415. to \$4,932,853. The total value was \$1,791,147. or 26.7% below the average for the past ten years largely due to the continued change in the composition of the catch.

Landings of smelt and perch comprised one-half of the Provincial total for 1960, largely replacing, in total weight, the more valuable blue and yellow pickerel, whitefish, lake herring and lake trout of earlier years. A more efficient method of harvesting smelts by the newly developed smelt trawling resulted in increased catches of this species in Lake Erie which were produced economically throughout the year even though the average value for this fish remained at less than 4¢ per pound for the eleven and two-thirds million pounds landed.

The number of fishermen in Ontario was relatively unchanged with a decrease to 3,409 in 1960 as compared with 3,527 in 1959. The main causes for the decrease were a continuing movement of men out of the industry in Georgian Bay and Lake Superior resulting from the scarcity of marketable fish in these waters, and more efficient fishing methods developed on Lake Erie. A return of men to fishing is noted in the Lake

Huron fishery due to the reappearance of apparently large numbers of whitefish and to the good prices received for chub. In the northern inland division the greater interest in fishing resulted in an increase of men engaged in fishing. In this area many fishermen are Indians and frequently large families or band groups derive their income, for a part of the year, from one fishing licence. In Lake Ontario fewer persons were fishing than in 1959.

The equipment required in the fishery includes the fishing vessels, nets and shore installations. All of these categories remained relatively unchanged from the previous year in both number and value, the total value being over ten million dollars.

Catches of fish, classified by species and by lake or fishing area showed some interesting changes in 1960.

Landings in Lake Erie totalled 29,219,068 pounds, down 7.5% from the previous year. The big decrease of 40.6% in perch, to 11,653,804 pounds was largely offset in the totals by increases of 67.6% in smelt landings and over 130% in white bass.

Landings in Lake Ontario, Lake St. Clair, Georgian Bay and Lake Superior were down by 4.6%, 22%, 2.8% and 26.5% respectively. In Lake Ontario slight decreases were noted in carp, bullheads, eels and smelt but increases were reported in several species, including whitefish and sunfish. The reduction in Lake St. Clair landings was due largely to lower carp production. In Georgian Bay and Lake Superior reduced landings were due mainly to the poor fishing resulting from sea lamprey attack. A reduction in the fall lake herring production accounted for the big percentage drop in the Lake Superior totals.

The most notable increase in production occurred in Lake Huron where whitefish landings were the highest recorded since 1908. Chub production also continued at a high level and contributed to the 58% increase in this fishery. In the North Channel of Lake Huron increases in several species including suckers contributed to the rise of 20% over the 1959 catch. In the North Channel of Lake Huron increases in several

species including suckers contributed to the rise of 20% over the 1959 catch.

Northern lakes and rivers continued to produce at a good high level, 8.1% above 1959 for a total of over eight million pounds of fish.

During 1960 the organizations of Ontario Fishermen were active and both the Lake Erie Fisheries Council and the Ontario Council of Commercial Fisheries played an important role in recommending changes which they considered to be of value to the fishery of the Province.

The experimental trawl fishery for smelt proved successful during the year in Lake Erie and an experimental vessel made a short reconnaissance survey in Lake Huron and Georgian Bay. Trawls took a total of 7,018,785 pounds of fish during the year, of which 6,709,694 pounds were smelt. The catches were made during each month of the year, being halted only during the heaviest ice periods of late winter.

**COMPARATIVE STATEMENT OF THE YIELD OF THE FISHERIES
IN THE PROVINCE OF ONTARIO**

BY SPECIES

<u>Species</u>	<u>1959</u> <u>(lbs)</u>	<u>1960</u> <u>(lbs)</u>	<u>Increase</u> <u>(lbs)</u>	<u>Decrease</u> <u>(lbs)</u>
Perch (yellow)	19,967,709	12,747,196		7,220,513
Smelt	7,059,509	11,666,133	4,606,624	
Whitefish	3,183,504	3,844,949	661,445	
Yellow pickerel	4,652,859	3,702,420		950,439
White bass	1,444,396	3,304,524	1,860,128	
Lake Herring	2,947,850	2,226,973		720,877
Chub & Tullibee	1,576,012	1,864,699	288,687	
Suckers	1,409,780	1,616,021	206,241	
Sheepshead	1,418,720	1,539,332	120,612	
Carp	1,518,566	1,124,465		394,101
Northern pike	993,334	966,353		26,981
Ling	432,196	613,992	181,796	
Bullheads	480,097	467,323		12,774
Catfish	318,871	321,331	2,460	
Lake trout	522,245	286,402		235,843
Sunfish	225,237	286,312	61,075	
Sturgeon	179,407	183,654	4,247	
Eels	140,401	130,272		10,129
Rock bass and Crappies	92,390	127,671	35,281	
Saugers	112,111	85,306		26,805
Menominee	23,687	62,841	39,154	
Goldeyes	15,211	32,567	17,356	
White perch		26,613	26,613	
Blue pickerel	49,790	5,241		44,549
Caviar	1,864	1,953	89	
Alewives, Dogfish, Gar and Shad	<u>226,597</u>	<u>162,714</u>		63,883
TOTAL	48,992,343	47,397,257		
NET DECREASE				1,595,086

**COMPARATIVE STATEMENT OF THE NUMBER OF COMMERCIAL FISHING
LICENCES ISSUED IN THE PROVINCE OF ONTARIO**

<u>Type of Licence</u>	<u>1959</u>	<u>1960</u>	<u>Increase</u>	<u>Decrease</u>
Gill net	1,117	1,089		28
Pound net & Trap net	150	141		9
Hoop net	260	250		10
Coarse Fish Seine	112	117	5	
Baited hook	205	197		8
Dip net	15	14		1
Trolling	24	20		4
TOTAL	1,883	1,828		
Bait-Fish				
Seine, Trap & Dip net	1,841	1,853	12	
Dealer's	387	419	32	
Preserving	59	76	17	
TOTAL	<u>2,287</u>	<u>2,348</u>		
TOTAL, ALL LICENCES	4,170	4,176		
NET INCREASE				6

COMPARATIVE STATEMENT OF THE PRODUCTION OF THE FISHERIES
IN THE PROVINCE OF ONTARIO

YIELD BY FISHING AREA

Fishing Area	1959 lbs	1960 lbs	Increase lbs	Decrease lbs
Lake Ontario	2,051,467	1,958,180		93,287
Lake Erie	31,596,750	29,219,068		2,377,682
Lake St. Clair	845,229	659,021		186,208
Lake Huron	2,203,318	3,488,637	1,285,319	
Georgian Bay	224,895	218,503		6,392
North Channel	171,475	205,806	34,331	
Lake Superior	3,850,216	2,828,395		1,021,821
Northern Inland	7,616,929	8,234,136	617,207	
Southern Inland	432,064	585,511	153,447	
TOTAL	48,992,343	47,397,257		
NET DECREASE				1,595,086

VALUE BY FISHING AREA

Fishing Area	1959 \$	1960 \$	Increase \$	Decrease \$
Lake Ontario	392,865.97	354,704.64		38,161.33
Lake Erie	2,200,386.57	2,060,121.11		140,265.46
Lake St. Clair	102,410.03	129,053.48	26,643.45	
Lake Huron	513,522.06	908,409.25	394,887.19	
Georgian Bay	68,124.74	60,945.37		7,179.37
North Channel	68,341.45	56,950.07		11,391.38
Lake Superior	376,982.27	269,946.41		107,035.86
Northern Inland	1,089,964.35	1,034,885.64		55,078.71
Southern Inland	53,840.51	57,837.91	3,997.40	
TOTAL	\$4,866,437.95	\$4,932,853.88		
NET INCREASE			66,415.93	

STATISTICS OF THE FISHING INDUSTRY IN THE PUBLIC WATERS OF ONTARIO, FOR THE YEAR ENDING DECEMBER 31, 1960

QUANTITIES OF FISH TAKEN (IN POUNDS)

SPECIES	LAKE ONTARIO	LAKE ERIE	LAKE ST. CLAIR	LAKE HURON*	GEORGIAN BAY	NORTH CHANNEL	LAKE SUPERIOR	NORTHERN INLAND	SOUTHERN INLAND	TOTAL CATCH	TOTAL VALUE
BLUE PICKEREL	1,038	4,203								5,241	\$1,499.13
BULLHEAD	248,691	37,803	4,887			405		46,723	128,814	467,323	68,556.18
CARP	310,088	303,787	164,964	25,311	37,124	7,191	13	36	275,951	1,124,465	63,667.84
CATFISH	31,049	163,996	83,642	26,418	2,586				13,640	321,331	60,684.21
CHUB; TULLIBEE	918	21		1,302,351	28,782		103,026	429,601		1,864,699	325,716.52
EELS	127,656	177							2,439	130,272	15,635.54
LAKE HERRING	73,537	6,159		17,448	2,466	3,144	2,117,270	6,949		2,226,973	81,806.10
LAKE TROUT	1,327	33		282	1,019	74	122,418	161,249		286,402	108,847.43
LING	51	7,206		122	408	1,000	6,623	590,905	7,677	613,992	3,011.23
NORTHERN PIKE	42,483	277	15,421	784	4,006	22,054	3,141	878,187		966,353	80,298.88
PERCH (YELLOW)	137,278	11,653,804	35,472	858,886	13,537	8,684	15,556	17,187	6,792	12,747,196	1,314,945.47
MENOMINEE	323			3,135	660	4,316	53,956	451		62,841	6,154.15
SUCKERS	35,784	76,566	113,048	65,242	27,704	74,282	27,428	1,179,136	16,831	1,616,021	26,109.74
ROCK BASS and CRAPPIES	32,705	36,747	14,322			745		35,173	7,979	127,671	16,263.22
SAUGERS	112	2,101	4,386	648	753	51	19,234	58,021		85,306	15,878.81
SHEEPSHEAD	15,903	1,467,696	23,718	27,412				4,175	428	1,539,332	17,039.58
SMELT	188,317	11,466,564		2,419	452	400	600	3,581	3,800	11,666,133	367,275.20
STURGEON	9,332	4,919	12,616	5,308	2,100	7,186	10,546	119,978	11,669	183,654	161,092.55
CAVIAR	95	75	299	212	43	57		1,156	16	1,953	4,443.81
SUNFISH	135,606	26,137	17,205					25	107,339	286,312	25,819.33
WHITE BASS	9,070	3,255,409	25,747	11,648	56,908	34,813	99,489	1,201	1,449	3,304,524	298,068.44
WHITEFISH	397,456	20,539		826,716				2,409,028		3,844,949	835,492.16
YELLOW PICKEREL	126,414	618,917	138,377	229,774	39,955	41,404	249,095	2,258,484		3,702,420	1,025,775.84
GOLDEYES								32,567		32,567	6,942.65
WHITE PERCH	17,440	9,093							80	26,613	525.60
ALEWIFE, DOGFISH GAR and SHAD	15,507	56,839	4,917	84,521				323	607	162,714	1,304.27
TOTAL CATCH	1,958,180	29,219,068	659,021	3,488,637	218,503	205,806	2,828,395	8,234,136	585,511	47,397,257	
TOTAL VALUE	\$354,704.64	2,060,121.11	129,053.48	908,409.25	60,945.37	56,950.07	269,946.41	1,034,885.64	57,837.91		4,932,853.88

* Production in U.S. waters taken by Ontario residents under State of Michigan licences and landed at ports in Ontario:
CHUB 198,820 lbs, \$45,728.60 est. value; WHITEFISH 9,860 lbs, \$4,437.00 est. value. (Not included in above table.)

STATISTICS OF THE FISHING INDUSTRY IN THE PUBLIC WATERS OF ONTARIO FOR THE YEAR ENDING DECEMBER 31, 1960

EQUIPMENT

NUMBER OF MEN		LAKE ONTARIO	LAKE ERIE	LAKE ST. CLAIR	LAKE HURON	GEORGIAN BAY	NORTH CHANNEL	LAKE SUPERIOR	NORTHERN INLAND	SOUTHERN INLAND	TOTALS
		494	774	76	183	97	47	191	1,367	180	3,409
FISHING BOATS											
40 feet and over		No. 6	122	1	38	36	4	20	11		238
		Tons 66	2,379	2	612	408	28	338	124		3,957
		Value \$18,300	1,859,550	1,500	388,000	335,018	31,500	199,224	105,500		\$2,938,592
20 to 39 feet		No. 72	121	17	20	46	10	53	86	4	429
		Value \$99,975	340,864	28,600	60,250	95,700	25,100	148,350	98,425	600	\$897,864
Under 20 feet		No. 290	91	40	6	27	25	31	692	109	1,311
		Value \$63,065	29,945	19,960	1,825	11,075	4,782	10,445	208,948	13,602	\$363,647
FISHING GEAR											
Gill Net		Yards 1,007,115	4,349,259		1,105,619	1,047,350	166,800	930,545	888,300	28,700	9,523,688
		Value \$232,928	1,357,318		288,530	252,611	36,860	236,125	270,471	8,596	\$2,683,439
Pound Nets		No. 306	\$219,600	262	6	54	43	24	49		744
		Value \$61,750			4,000	77,600	24,100	19,700	32,250		\$439,000
Trap Nets		No. 512	\$300,700		125		5		15	4	661
		Value \$1,066		4	145,900		1,300		6,890	1,200	\$455,990
Hoop Nets		No. 77	5,545	210		20		1	78	615	1,861
		Value \$68,725				275		100	6,570	43,345	\$124,770
Seine Nets		No. 21	34	22	1	1				26	105
		Yards 2,160	9,510	4,800	10	300			2,812	2,940	19,592
		Value \$3,194	24,191	6,350	10	15			3,940		\$37,700
Night Lines		Hooks 27,490	13,740	17,700	300	600			7,500	4,570	71,900
		Value \$3,544	3,192	3,820		100			1,643	320	\$12,619
Dip Nets		No. 2	6	1		1			3	8	21
		Value \$15	84	10		5			7	44	\$165
Trolling Lines		No. 38									38
		Value \$765									\$765
Trawl Nets		No. 57	\$42,450								57
		Value \$42,450									\$42,450
SHORE INSTALLATIONS											
Freezers and Ice Houses		No. 28	42	14	26	36	17	52	333	10	558
		Value \$11,340	\$583,460	\$12,700	\$68,775	\$62,280	\$13,217	\$36,950	\$145,178	\$4,641	\$938,541
Piers & Wharves		No. 35	71	16	18	51	14	74	230	7	516
		Value \$10,785	\$66,650	\$4,850	\$8,350	\$51,850	\$9,167	\$30,635	\$54,215	\$775	\$237,277
Net Sheds		No. 185	198	24	57	56	21	93	178	27	839
		Value \$92,490	\$501,289	\$26,450	\$92,000	\$76,980	\$29,066	\$55,970	\$67,638	\$9,005	\$950,888.
TOTAL VALUE		\$605,126	5,334,838	166,200	1,057,640	963,509	175,092	737,499	997,735	86,068	\$10,123,707

FOREST PROTECTION BRANCH



A tractor in action on a fire near Sioux Lookout.



Otter aircraft, equipped with water tanks, on pontoons, dropping water over a target area.

FOREST PROTECTION BRANCH

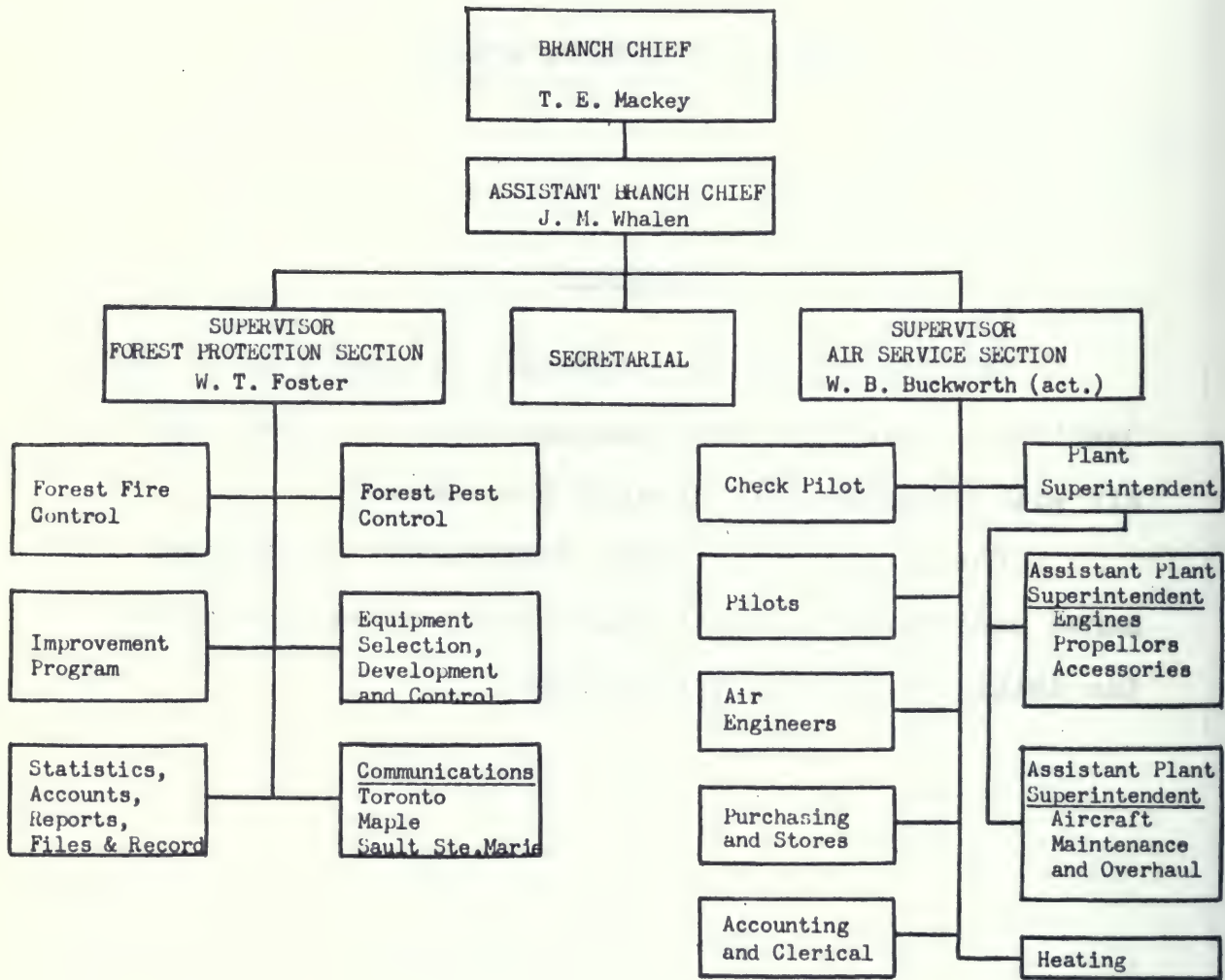
Foreword

The Forest Protection Branch is comprised of two Sections, Protection with headquarters in Toronto and Air with headquarters in Sault Ste. Marie.

The activities of each section for the twelve month period ending March 31st, 1961 are set forth in the detailed report which follows.

ORGANIZATION CHART

FOREST PROTECTION BRANCH



March 31, 1961

RESPONSIBILITIES AND FUNCTIONS

The Forest Protection Branch is responsible for forest protection under authority of the Forest Fire Prevention Act and for the control of forest pests and diseases.

The Air Service Branch operates and maintains a fleet of 45 aircraft to meet the flying requirements of the Department and occasional special requirements of other Departments of Government of Ontario.

Main functions of the Branch are:-

Fire Control Organization: - Staff distribution. Fire District Boundaries.

Fire Control Planning: - Development of instructions for preparation of fire control plans.

Fire Prevention: - Travel, fire and work permits. Removal of hazards.

Construction of fire guards. Warnings to the public of existing and impending fire danger.

Fire Detection: - Towers and aircraft patrols.

Fire Suppression: - Arrangements for emergencies. Movement of resources including aircraft from region to region as required.

Training: - Staff and co-operating Woods Industries.

Co-operation with: - Department of Transport, Railway Companies, Indian Affairs Branch, Woods Operators, Tourist Camp Operators and other users of the forest in preventing, reporting and suppressing fires.

Agreements with: - Municipalities and Woods Operators on lands under timber license and railway lands covering all phases of forest fire prevention and control.

Communications: - Radio, telephone and teletype.

Transportation: - Aircraft, helicopters, vehicles, watercraft.

Building and Improvement Projects: - Program for all of the Department.

Liaison with the Department of Public Works. Permanent records of all Department establishments.

Equipment: - Program for all of the Department including vehicle records, licensing and insurance.

Fire Statistics and Reports: -

Aircraft: - Maintenance and operation of aircraft in compliance with Department of Transport Regulations and to provide the utmost in safety. Selection of all technical staff including pilots and engineers.

FOREST PROTECTION SECTION

Forest Fire Control

During the 1960 fire season, 956 fires occurred burning over a total of 31,386 acres. During the previous decade, 1950 to 1959 inclusive, average fire occurrence was 1,293 fires and average annual area burned 97,516 acres. It will be noted, for 1960, that the number of fires and area burned is 74% and 32% respectively of the previous decade average.

Fire Danger Conditions Rainfalls during the 1960 fire season were light, but ideally spaced from a fire control standpoint. Only one period of extended drought and extreme fire danger occurred in the Province, in the Sioux Lookout district. A serious fire situation occurred in this area of North Western Ontario and lasted for the greater part of July.

In Sioux Lookout district during the month of July, the number of days in each fire danger class was as follows:

Low	-	1 day
Medium	-	3 days
High	-	17 days

From this it can be seen that the fire danger or dryness of forest fuels was rated high to extreme during 90% of the month of July. Also during the month of July in Sioux Lookout district, 104 fires were reported, 52 of which occurred in a five day period, July 7th to 11th inclusive. The 104 fires mentioned burned over a total of 19,722 acres which is approximately 63% of the total area burned for the entire province during 1960.

Fire conditions in Sioux Lookout district were considerably above average during the 1960 fire season. The remainder of the province experienced average to below average fire conditions during the same period..

Fire Frequency by Cause Lightning caused approximately 32% of all fires reported during the 1960 fire season. This is 10% higher than the decade

average of 22% for the period 1950 to 1959 inclusive. Regardless of this fact, 68 out of every 100 fires that occurred during 1960 resulted from persons being careless with fire in one form or another.

Prosecutions and Convictions A total of 31 charges were laid under The Forest Fires Prevention Act and Regulations resulting in 30 convictions.

Forest Fire Suppression A check on the severity of burning conditions and on fire frequency in Sioux Lookout district clearly indicates that a potentially serious fire situation developed there during July, 1960. Two of the main reasons for maintaining a low area burned was the flexibility of the Department's fire fighting resources including extensive use of water-dropping aircraft.

Flexibility of the fire control organization has developed over the years and proved highly successful in meeting the serious fire situation that developed during July, 1960 in North-western Ontario. Fire-weather build-ups were watched carefully. When it appeared certain that a number of lightning fires would occur in the Red Lake area, all districts were alerted. A flow of trained fire fighters, aircraft and fire fighting equipment began to move into the danger area from many parts of the province. Men and equipment were dispatched in a matter of hours from points as far east as Pembroke to the Sioux Lookout district.

Aerial water dropping proved to be a very effective fire retarding operation. Department Otter and Beaver aircraft, with float-mounted tanks, were able to cool down and hold small fires and portions of large fires giving ground crews a better opportunity to effect control.

During the 1960 fire season five helicopters were employed under contract. They were based at Sudbury, Chapleau, Cochrane, Port Arthur and Kenora. Helicopters have proven very effective in fire suppression work ferrying men and equipment into hard-to-get-at locations around fires.

These aircraft are also used on projects carried out by other Branches of the Department when fire danger conditions permit.

New Developments A manual covering various levels of fire control planning was completed during 1960. Fire control plans will be submitted to Head Office covering each fire district. More detailed plans are required to cover certain high value areas such as the Kirkwood Management Unit in Sault Ste. Marie district and county forests under agreement in Southern Ontario. All plans will be reviewed and revised as required annually.

A fire suppression equipment testing centre was established at Maple Research Station with the co-operation of the Research Branch. Any new item of fire-fighting equipment coming on the market will be thoroughly tested and evaluated prior to adoption.

Work was started on streamlining water dropping tanks for our Otter aircraft. An electrical trip mechanism is also being developed for the tanks. Both modifications are expected to improve water dropping operation from the standpoint of efficiency and safety.

Forest Insects and Diseases

Forest insect and disease problems in Ontario are shared co-operatively with the Forest Entomology and Pathology Branch of the Canada Department of Forestry. The Province is responsible for conducting all control operations on lands under its jurisdiction, and the federal government conducts the survey and research work on which control decisions are based.

Surveys Each year this Department participates to a large extent in the Ontario portion of the Canada-wide Forest Insect and Disease Survey of the federal Department of Forestry. Detailed information concerning the occurrence and distribution of specific forest insects and diseases is contained in the Annual Report of the Forest Insect and Disease Survey.

The major insect infestations during the 1960 season were again caused by the spruce budworm, the larch sawfly, the European pine sawfly, and several species of native sawflies on pines. The native forest tent caterpillar, eastern tent caterpillar, and the black-headed budworm showed substantial increases in number, but did not reach serious proportions.

There was an over-all reduction in the area infested by the spruce budworm. The infestation remained about the same in the Fort Frances District, virtually disappeared from the Kenora District, and showed a sharp reduction in intensity in the Sioux Lookout District. In the Port Arthur District there was a slight eastern extension along the southern boundary, but this was accompanied by a reduction in area in the vicinity of Lac des Mille Lacs. In the Geraldton District the over-all area of infestation remained about the same, but there was a considerable reduction in the area classified as heavy. The three isolated infestations in spruce plantations in southern Ontario declined still further in 1960.

Larch sawfly populations across Ontario were variable. In the western areas, populations declined in the Port Arthur District, showed little change in the Kenora District, increased locally in the Sioux Lookout and Geraldton Districts, and increased in the eastern part of the Fort Frances District. Infestation patterns were also irregular throughout northeastern and central Ontario. In southern Ontario severe defoliation occurred on a number of European larch plantations.

The European pine sawfly again extended its range eastward in the Lake Simcoe District, and now extends over southwestern Ontario as far east as a line approximately from the mouth of the Nottawasaga River to Leaside.

The forest tent caterpillar caused severe defoliation to hardwoods at widely separated localities in northwestern Ontario and the

Sudbury District. This may be the beginning of a new outbreak period for this defoliator, which occurs at 10 to 14-year intervals across Ontario. The last general outbreak of this insect started in 1948.

The eastern tent caterpillar, which is conspicuous by the tent it makes on wild cherry and apple trees along roadsides, showed increased numbers throughout most of southern Ontario. The insect was particularly prevalent in the Parry Sound District.

Populations of the black-headed budworm increased in almost all districts, although to date this insect has not shown the potential for destruction in Ontario that it has on the east and west coasts.

The severe infestations of the jack-pine budworm continued in the north-central and eastern parts of the Fort Frances District.

The major tree disease in Ontario is the white-pine blister rust, which is well-distributed on white pine over most of the tree's range. The intensity of the disease varies locally, depending on climate, topography, and the abundance of the alternate hosts.

The Dutch elm disease had a considerable extension in its known distribution, and was found for the first time in Grey, Simcoe, Wellington, and Renfrew Counties, and the Parry Sound District.

For the past two years considerable attention has been given to the deterioration or dieback of sugar maple in woodlots in the Lake Huron District. The survey of sugar maple deterioration conducted last year revealed that, in addition to maple, almost all hardwood species are suffering some degree of dieback. It is encouraging that the latest check on the condition of the trees under observation indicates that the maple and other hardwoods are showing slight improvement.

Control Most operations in the direct control of insect infestation have been conducted in the pine, spruce, and larch plantations of southern

Ontario. Spraying and leader clipping were carried out on almost 3,000 acres for control of the white-pine weevil, and over 1,500 acres were sprayed for control of various species of sawflies. The sawfly spraying included the use of a virus, as well as DDT, on the European pine sawfly.

Now that new, effective control chemicals have been developed, it has become apparent that increased attention must be paid to damage done by the white grub where trees are being planted on abandoned agricultural lands, and to the mouse problem in young plantations where sod is prevalent. A start on the control of these pests was made in 1960.

The disease control programme was confined almost entirely to the white-pine blister rust. The chemical 2,4,5-T is used to eradicate the alternate host plants, wild currants and gooseberries, from the immediate vicinity of the pines. Each year a portion of a long-term control programme is completed, and in 1960 about 6,800 acres were protected against blister rust in important pine producing areas in the North Bay, Pembroke, Tweed and Kemptville Districts.

Dormant spraying with DDT to restrict the Dutch elm disease was conducted in a provincial park in the Lake Simcoe District.

Radio Communications

There was a slight increase in the number of radiograms transmitted and received over the Department's province-wide radio communication system for the year; 91,552 messages were transmitted over the network totalling 2,322,001 words, the increase over the previous year being one half of 1%. Satisfactory communication was provided with all radio equipped vehicles, patrol vessels, aircraft, portable and fixed radio stations using the currently assigned 10 H.F. and 6 V.H.F. frequencies.

Obsolete lookout tower radio equipment was replaced with new dry

battery operated units in the Fort Frances and Port Arthur districts. Fifty-nine VHF Walkie Talkie portable radio-telephones were purchased for forest fire duty and fifty-eight new mobile radiotelephones were constructed by the communication section. A transistorized intercom unit was designed, constructed, and installed in all Otter aircraft by the Sault Ste. Marie communication section.

The following quantities and types of radio equipment constituted the 1960 inventory:

Tower Radiotelephones	330
Mobile Radiotelephones (H.F. and V.H.F.)	286
Marine Radiotelephones	12
Portable Radiotelephones ($\frac{1}{2}$ watt)	277
Portable Radiotelephones ($2\frac{1}{2}$ watt)	111
Portable VHF Walkie Talkie Radiotelephones	50
Portable VHF Radiotelephones (2 watt)	100
P35 Fire Base Radiotelephones	78
30 Watt H.F. Ground Radio Stations	105
75 Watt H.F. Ground Radio Stations	2
100 Watt H.F. Ground Radio Stations	3
150 Watt H.F. Ground Radio Stations	7
300 Watt H.F. Ground Radio Stations	2
500 Watt H.F. Ground Radio Stations	8
15 Watt V.H.F. Ground Radio Stations	60
50 Watt V.H.F. Ground Radio Stations (including V.H.F. attachments for 30 Watt Ground Stations)	69
Aircraft Radio Stations	44
Aircraft Ground Hailers	20
Total	- 1,564

Number of Forest Fires
and Area Burned Over by Districts
1960

<u>District</u>	<u>No. of Fires</u>	<u>No. of Acres</u>
Sioux Lookout	148	20,303
Kenora	103	1,657
Fort Frances	81	1,231
Port Arthur	77	450
Geraldton	73	5,772
Kapuskasing	17	474
Cochrane	16	485
Swastika	4	69
Chapleau	15	30
Gogama	11	9
Sault Ste. Marie	28	18
Sudbury	53	65
White River	30	19
North Bay	18	12
Parry Sound	80	70
Pembroke	54	62
Tweed	89	521
Kemptville	-	-
Lindsay	49	136
Lake Huron	1	-
Lake Simcoe	<u>9</u>	<u>3</u>
	956	31,386

Number of Forest Fires
and Area Burned Over by Months
1956 - 1960

Month	1960 Fires-Acres		1959 Fires-Acres		1958 Fires-Acres		1957 Fires-Acres		1956 Fires-Acres	
March	-	-	-	-	-	-	7	20	-	-
April	21	119	90	972	413	5,577	187	2,809	40	158
May	145	2,361	162	1,051	411	26,381	543	36,791	147	1,148
June	79	387	161	692	198	3,626	109	1,143	352	219,295
July	326	27,515	341	2,045	69	90	234	2,940	112	494
August	190	275	248	514	403	920	487	2,321	231	391
September	87	135	25	5	37	18	44	63	20	32
October	91	539	1	-	12	15	59	562	109	4,628
November	17	55	1	2	15	25	1	2	6	66
Totals	956	31,386	1,029	5,281	1,558	36,652	1,671	46,651	1,017	226,212

Number of Forest Fires and Area Burned Over

By Causes

1956 - 1960

Causes	1956			1957			1958			1959			1960		
	Fires	- Acres		Fires	- Acres		Fires	- Acres		Fires	- Acres		Fires	- Acres	
Settlers	55	804		52	648		123	2,670		125	2,846		49	4,329	
Campers	265	1,103		323	1,245		325	2,616		379	2,746		196	532	
Railways	49	764		67	227		149	1,874		176	3,129		122	403	
Lightning	310	26,982		242	1,120		219	1,375		275	2,575		302	216,210	
Logging Operations	20	323		25	993		17	4,573		39	3,417		22	135	
Mining Operations	2	2		2	23		1	2		7	11,930		6	19	
Smokers	116	515		159	558		371	4,414		342	14,649		145	3,296	
Road Construction	18	12		12	56		63	8,768		73	1,066		34	153	
Incendiary	12	458		13	141		43	2,020		26	2,583		8	480	
Prospectors	1	2		4	4		1	20		3	42		8	252	
Miscellaneous	97	407		116	209		229	8,126		194	1,578		123	401	
Unknown	11	14		14	57		17	194		32	90		2	2	
Totals	956	31,386		1,029	5,281		1,558	36,652		1,671	46,651		1,017	226,212	

Classification of Forest Fires

By Size 1956 - 1960

Size	1960 No.	1959 No.	1958 No.	1957 No.	1956 No.
1/4 acre and under	416	470	490	575	395
Over 1/4 to 5 acres	398	434	753	741	456
Over 5 to 10 acres	50	59	108	120	46
Over 10 to 100 acres	59	56	178	187	66
Over 100 to 500 acres	23	9	20	37	26
Over 500 to 1,000 acres	5	1	4	7	4
Over 1,000 to 10,000 acres	5	-	5	3	21
Over 10,000 acres	-	-	-	1	3
Totals	956	1,029	1,558	1,671	1,017

Acres of Land Burned Over

By Ownership 1956 - 1960

Classification	1960	1959	1958	1957	1956
Crown Land - Acres	29,190	2,580	25,544	24,250	221,822
Private Lands - Acres	2,196	2,701	11,108	22,401	4,390
Total Area in Acres	31,386	5,281	36,652	46,651	226,212
Number of Fires	956	1,029	1,558	1,671	1,017

Annual Acreage Burned - Crown and Private

Total Number of Fires

Average Fire Size

1925 - 1960

YEAR	CROWN ACRES	PRIVATE ACRES	TOTAL ACRES	TOTAL NO. OF FIRES	AVERAGE FIRE SIZE (ACRES)
1925	132,481	57,062	189,543	1,149	165
1926	65,888	22,486	88,374	1,110	80
1927	22,772	12,970	35,742	924	39
1928	96,436	3,947	100,383	536	189
1929	608,750	16,893	625,643	1,550	404
1930	357,531	354,278	711,809	1,402	508
1931	105,866	32,421	138,287	1,851	75
1932	626,555	52,466	679,021	2,073	328
1933	325,034	24,924	349,958	1,919	182
1934	160,348	38,285	198,633	1,568	127
1935	183,179	67,483	250,662	1,309	191
1936	1,153,876	110,557	1,264,433	2,264	558
1937	201,887	22,859	224,746	1,453	155
1938	96,168	42,077	138,245	1,292	107
1939	26,089	3,009	29,098	961	30
1940	100,990	20,624	121,614	1,014	120
1941	271,793	394,754	666,547	1,265	527
1942	77,709	36,007	113,716	1,224	93
1943	33,465	19,352	52,817	624	85
1944	73,228	95,663	168,891	1,137	149
1945	17,997	30,513	48,510	966	47
1946	44,656	32,113	76,769	1,739	44
1947	38,093	45,939	84,032	1,393	60
1948	854,778	162,611	1,017,389	2,036	500
1949	40,593	19,472	60,065	1,834	33
1950	13,203	23,577	36,780	985	37
1951	96,662	4,581	101,243	904	112
1952	7,264	5,157	12,421	1,095	11
1953	44,519	14,290	58,809	1,520	39
1954	36,115	18,578	54,693	881	62
1955	370,948	25,475	396,423	2,252	176
1956	221,822	4,390	226,212	1,017	222
1957	24,250	22,401	46,651	1,671	28
1958	25,544	11,108	36,652	1,558	24
1959	2,580	2,701	5,281	1,029	5
1960	29,190	2,196	31,386	956	33

MEANS OF FIRE DETECTION - 1956 - 1960

	Towers	Rangers	Public	Aircraft	Total Fires
1960 Totals	304	63	431	158	956
1959 Totals	414	66	458	91	1,029
1958 Totals	581	87	769	121	1,558
1957 Totals	575	141	753	202	1,671
1956 Totals	262	57	509	189	1,017

STATEMENT OF FIRE PERMITS ISSUED - 1956 - 1960 Number of Permits

1960	1959	1958	1957	1956
18,616	17,889	15,842	12,778	14,142

STATEMENT OF TRAVEL PERMITS ISSUED - 1956 - 1960

	1960	1959	1958	1957	1956
Permits					
94,634	112,916	121,373	118,690	181,396	
Persons					
332,471	390,510	412,468	427,834	608,138	

STATEMENT OF FIRE DAMAGE

Districts	CROWN Timber Damage		\$ Damage to Reproduction	PRIVATE Timber Damage	
	Cu.Ft.	\$		Cu.Ft.	\$
Sioux Lookout	14,287,747	285,754.94	4,032.79	635	12.70
Kenora	570,610	11,412.20	2,195.38	6,915	138.30
Fort Frances	25,557	511.14	697.66	8,838	176.76
Port Arthur	27,765	555.30	844.60	1,500	30.00
Geraldton	6,319,262	126,385.24	130.66	-	-
Kapuskasing	4,803	96.06	54.40	-	-
Cochrane	-	-	55.00	-	-
Swastika	11,305	226.10	-	72,250	1,445.00
Chapleau	-	-	-	-	-
Gogama	6,252	125.04	-	-	-
Sault Ste. Marie	389	7.78	20.77	-	-
Sudbury	30	.60	53.70	-	-
White River	3,651	73.02	98.07	98	1.96
North Bay	-	-	-	-	-
Parry Sound	1,906	38.12	4.70	1,646	32.92
Pembroke	342	6.84	37.60	940	18.80
Tweed	22,768	455.36	109.34	5,814	116.28
Lindsay	10,500	210.00	2.54	24,844	496.88
Lake Simcoe	128	2.56	-	-	-
Lake Huron	-	-	-	-	-
Totals	21,293,015	425,860.30	8,337.21	123,480	2,469.60

TABLE - 1960

\$ Damage to Reproduction	TOTAL Timber Cu.Ft.	Damage \$	\$ Total Damage to Reproduction	\$ Total Damage	\$ Private Property Damage
.16	14,288,382	285,767.64	4,032.95	289,800.59	2,520.00
212.79	577,525	11,550.50	2,408.17	13,958.67	100.00
16.12	34,395	687.90	713.78	1,401.68	182.50
905.60	29,265	585.30	1,750.20	2,335.50	32,450.12
-	6,319,262	126,385.24	130.66	126,515.90	-
-	4,803	96.06	54.40	150.46	80.40
-	-	-	55.00	55.00	11,976.94
-	83,555	1,671.10	-	1,671.10	-
-	-	-	-	-	2,734.20
-	6,252	125.04	-	125.04	-
57.00	389	7.78	77.77	85.55	-
126.75	30	.60	180.45	181.05	-
-	3,749	74.98	98.07	173.05	-
-	-	-	-	-	-
28.35	3,552	71.04	33.05	104.09	35.00
47.00	1,282	25.64	84.60	110.24	-
25.09	28,582	571.64	134.43	706.07	362.50
7.91	35,344	706.88	10.45	717.33	6,000.00
-	128	2.56	-	2.56	-
-	-	-	-	-	-
1,426.77	21,416,495	428,329.90	9,763.98	438,093.88	56,441.66

CLASSIFICATION OF FOREST AREA BURNED OVER - 1956 - 1960
By Forest Type

Year	No. of Fires	Mature Growth		Young Growth		Reproduction under 3.5" D.B.H.			Blow down	Insect Killed	Logging Clear Cut	Burn Reproducing	Plan-ta-tion ed Land	Non-For-est- Acres			
		Conif-erous	Hard Wood Mixed	Conif-erous	Hard Wood Mixed	Conif-erous	Hard Wood	Mixed Wood									
1960	956	20489	827	788	1347	137	162	786	91	248	38	-	4050	150	417	1856	31386
1959	1029	326	2	131	1016	105	138	224	68	434	7	2	289	132	26	2381	5281
1958	1558	2611	1265	2739	2809	861	2764	3569	2519	2591	444	4313	885	285	62	8935	36652
1957	1671	5967	241	4633	2676	2322	1356	2092	1119	2763	56	67	2457	150	272	20480	46651
1956	1017	70691	1371	33137	17137	1644	4522	8379	596	8419	22637	21801	18564	8981	35	8298	24212

NUMBER OF WORK PERMITS ISSUED - 1960 - 1961

DISTRICT	Mining Operations		Woods Operations		Miscellaneous Operations		No. of Permits	Men Engaged	No. of Permits	Men Engaged
	No. of Permits	Men Engaged	No. of Permits	Men Engaged	No. of Permits	Men Engaged				
Sioux Lookout	53	322	29	614	37	463	119	1399		
Kenora	12	52	141	1040	130	496	283	1588		
Fort Frances	13	217	114	1414	39	326	166	1957		
Port Arthur	13	57	58	4698	464	2439	535	7194		
Geraldton	69	368	128	5149	127	424	324	5941		
Kapuskasing	14	68	88	2157	19	490	121	2715		
Cochrane	63	362	215	3479	45	1083	323	4924		
Swastika	110	335	124	1442	20	111	254	1888		
Chapleau	7	22	53	1422	10	363	70	1807		
Gogama	23	87	24	595	12	188	59	870		
Sault Ste. Marie	19	171	104	968	31	413	154	1552		
Sudbury	40	229	55	375	58	503	153	1107		
White River	22	149	34	676	33	478	89	1303		
North Bay	30	132	284	1835	129	375	443	2342		
Parry Sound	-	-	105	639	114	1002	219	1641		
Pembroke	1	1	122	1483	62	2267	185	3751		
Tweed	13	39	341	1550	55	689	409	2278		
Lindsay	6	603	36	264	71	678	113	1545		
Lake Simcoe	-	-	1	1	4	34	5	35		
Totals	508	3214	2056	29,801	1460	12,822	4024	45,837		

REPORT OF MAJOR EQUIPMENT (As of March 31, 1961)

LOCATION	PORTABLE PUMPS	FIRE HOSE	BLAN- KETS	SLEEP- ING BAGS	BIN- OCU- LARS	CANOE'S	BOATS Not Inbo- ard	OUT BOARD MOTORS	MOTOR VEHI- CLES	TR- AIL- ERS	TR- ACT- ORS	RLY MTR CARS	# V	# S	# B
<u>DISTRICTS</u>															
Aylmer	12	115	303	14	7	29	4	13	5	18	12	nil	nil	nil	nil
Chapleau	44	200	1335	1709	55	21	40	10	nil	7	5	nil	nil	nil	nil
Cochrane	59	786	2087	1831	83	39	52	14	3	11	7	8	nil	1	nil
Port Frances	47	129	1329	1084	84	23	34	29	2	5	5	nil	nil	1	nil
Geraldton	87	694	2756	2037	82	31	61	6	3	7	5	4	nil	1	nil
Gogama	37	265	1344	1587	36	20	36	10	2	6	4	7	nil	3	1
Hespeler	16	145	357	18	10	21	2	19	nil	28	12	7	nil	2	1
Kapuskasing	48	494	1348	1729	56	34	64	8	nil	10	7	8	nil	1	nil
Kemptville	15	131	284	22	9	11	1	23	1	12	13	1	nil	nil	nil
Kenora	65	167	1942	518	53	26	48	28	5	5	7	1	nil	nil	1
Lindsay	46	321	1220	677	43	30	30	38	nil	24	17	1	nil	nil	1
Maple	32	246	628	326	8	24	4	23	1	18	25	nil	nil	1	nil
North Bay	50	239	1259	845	119	36	74	36	1	7	6	nil	nil	1	nil
Parry Sound	46	299	1328	1438	85	33	38	44	2	17	4	4	nil	3	1
Pembroke	41	300	1515	1989	106	17	77	33	1	13	10	4	nil	2	nil
Port Arthur	65	241	1790	1385	80	34	42	21	nil	9	8	2	nil	1	1
Sault Ste. Marie	68	408	2090	2953	69	31	45	13	nil	9	10	3	nil	3	nil
Sioux Lookout	94	469	2967	2007	92	25	65	18	2	8	7	1	nil	1	2
Sudbury	57	358	2216	2193	50	33	52	28	8	5	3	3	3	3	nil
Swastika	37	314	1375	947	59	20	32	22	nil	19	6	1	nil	1	nil
Tweed	40	368	920	452	63	39	12	46	1	20	4	1	nil	1	nil
White River	48	318	1402	979	60	23	59	12	nil	7	3	2	2	2	nil
<u>REGIONS</u>															
Central	45	511	1799	1294	7	nil	1	1	nil	1	nil	nil	nil	nil	nil
South-Central	31	120	800	1193	1	nil	nil	nil	nil	nil	1	nil	nil	nil	nil
Western	20	179	9	464	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil
Mid-Western	20	165	907	140	6	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil
South-Eastern	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil
Northern	34	230	1142	900	52	1	1	nil	nil	nil	nil	nil	nil	nil	nil
South-Western	nil	nil	14	nil	nil	nil	nil	nil	nil	1	3	nil	nil	nil	nil
<u>OTHERS</u>															
Ranger School	7	25	139	918	1	4	19	4	nil	1	2	nil	nil	nil	nil
Air Service	nil	nil	nil	182	155	nil	10	6	4	nil	2	nil	nil	nil	1
Head Office	14	nil	35	115	277	56	28	33	1	10	6	nil	nil	nil	nil
(incl. Research)															
TOTAL	1225	8237	36640	31946	2433	1750	930	538	42	277	194	41	18	14	9

V--Velocipedes; S--Snow Vehicles; B--Barges and Scows.

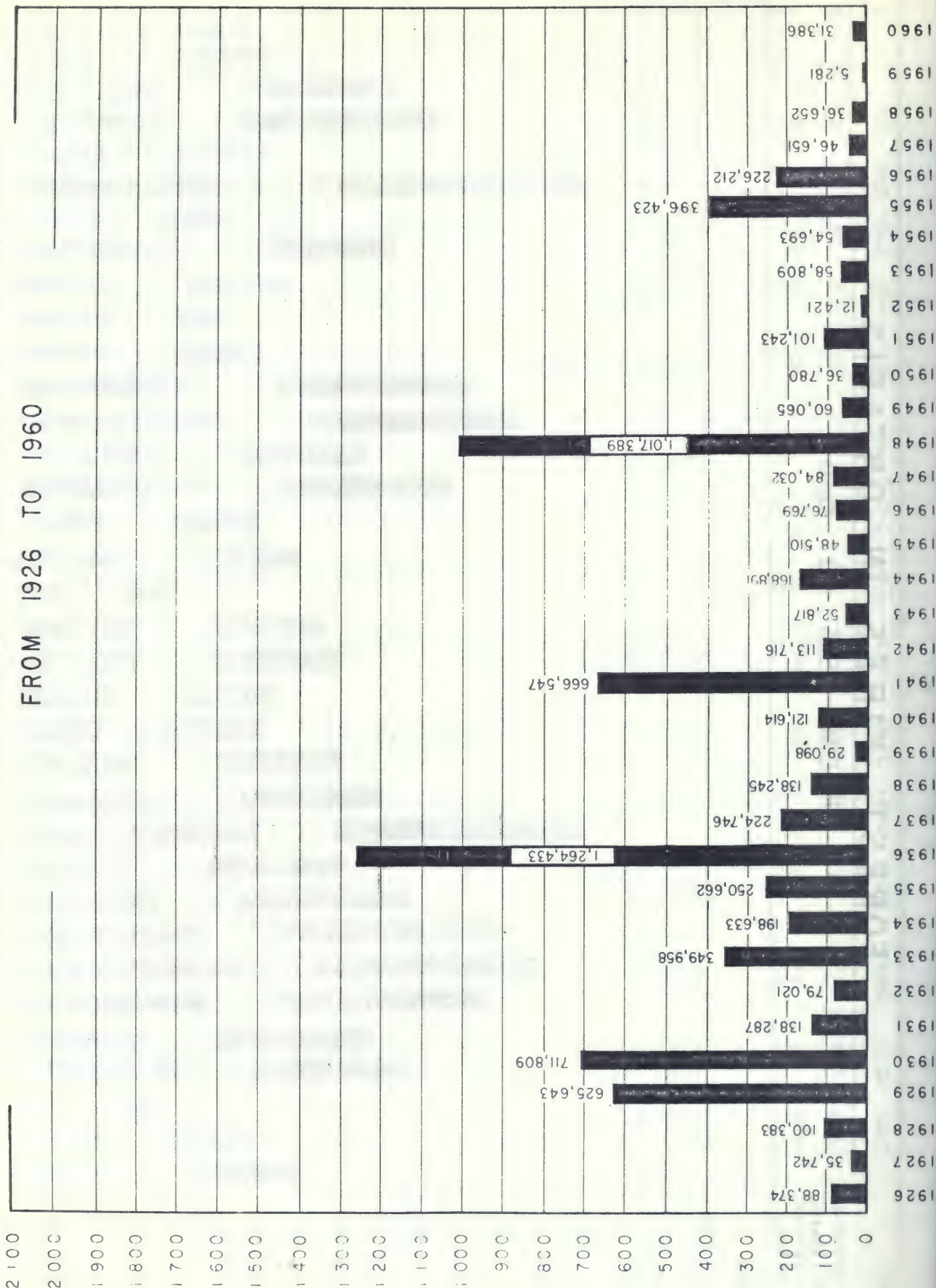
FOREST FIRES IN ONTARIO FROM 1926 TO 1960



THOUSANDS
OF ACRES

ACREAGE BURNED BY FOREST FIRES IN ONTARIO

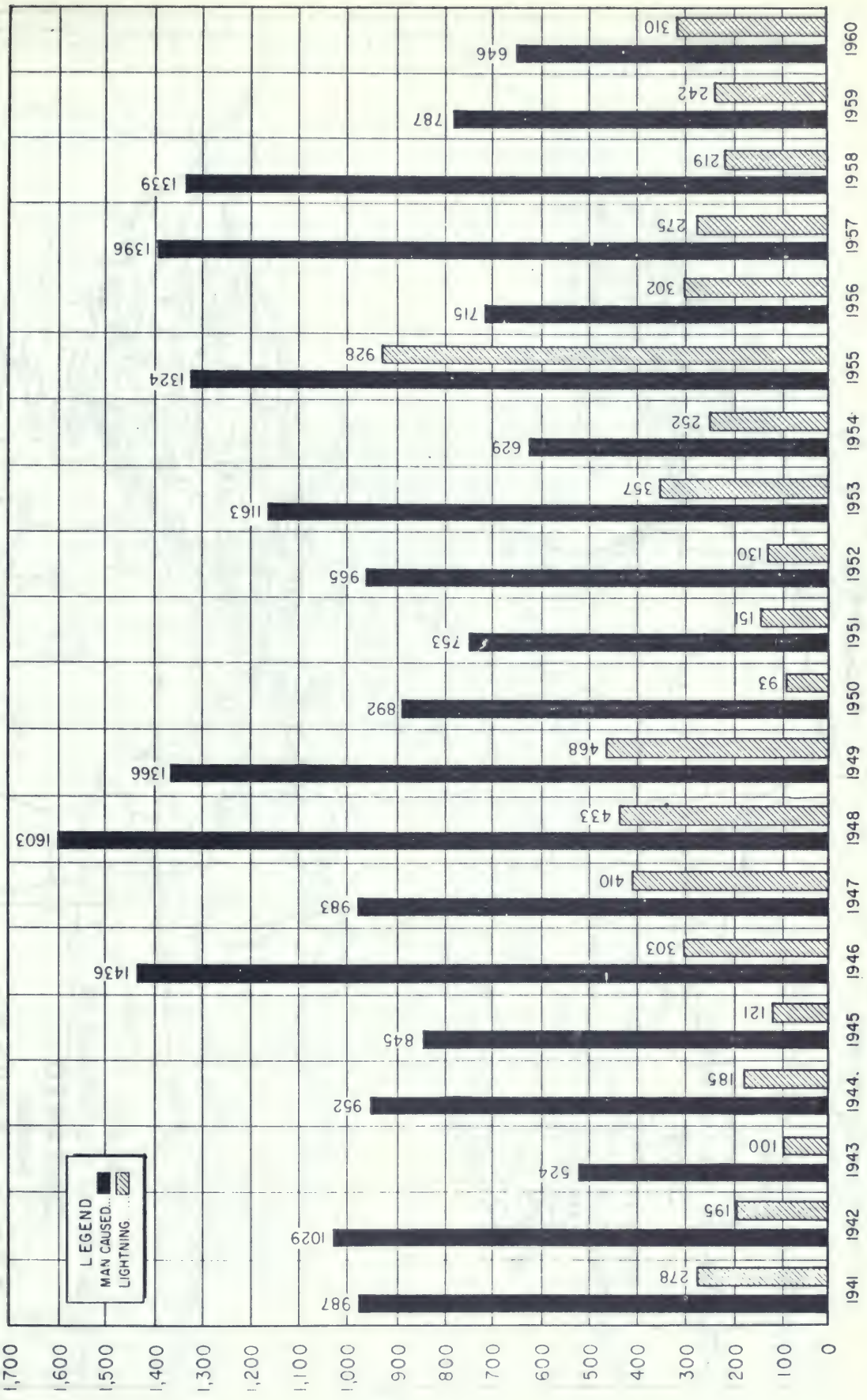
FROM 1926 TO 1960

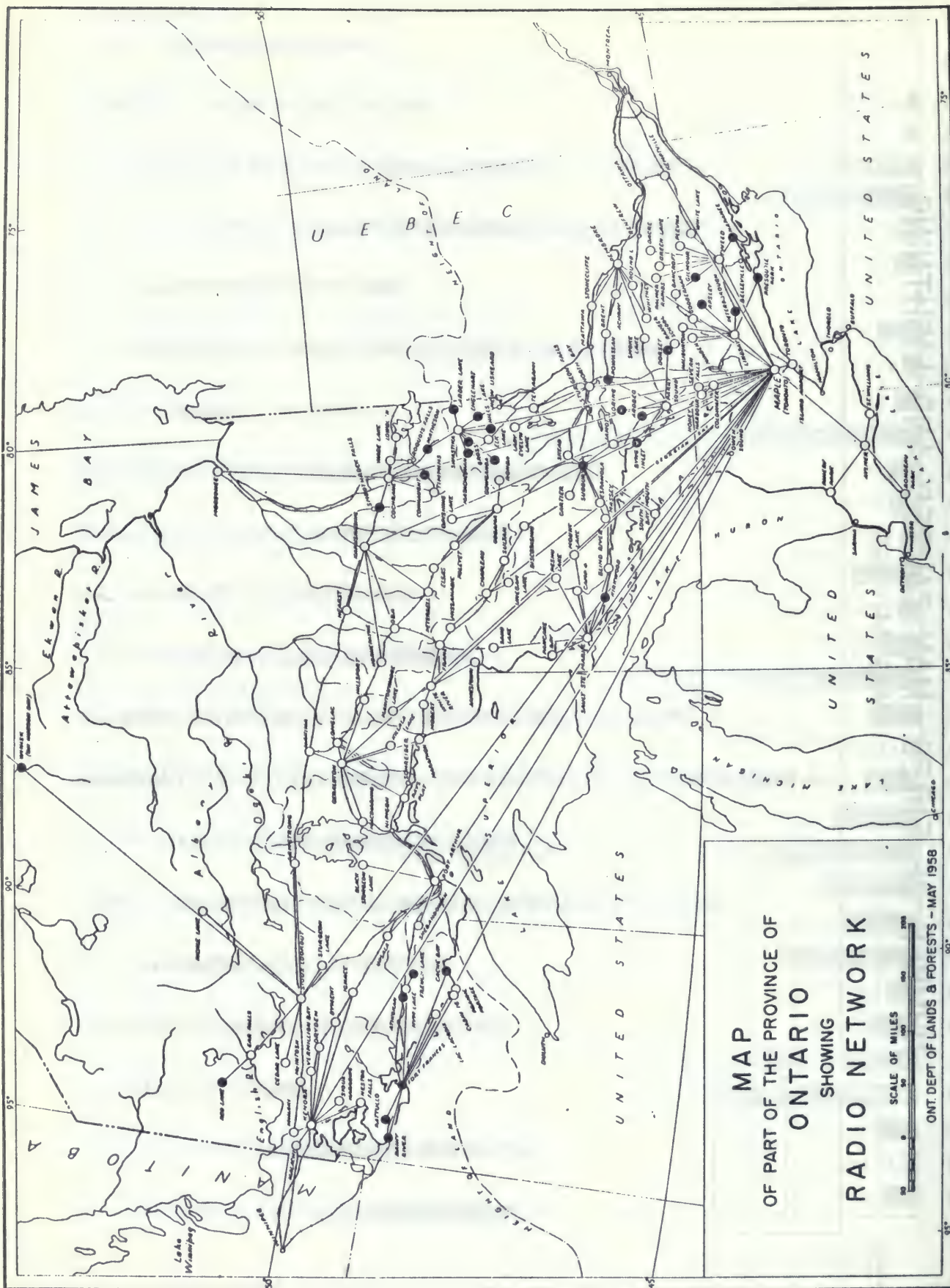


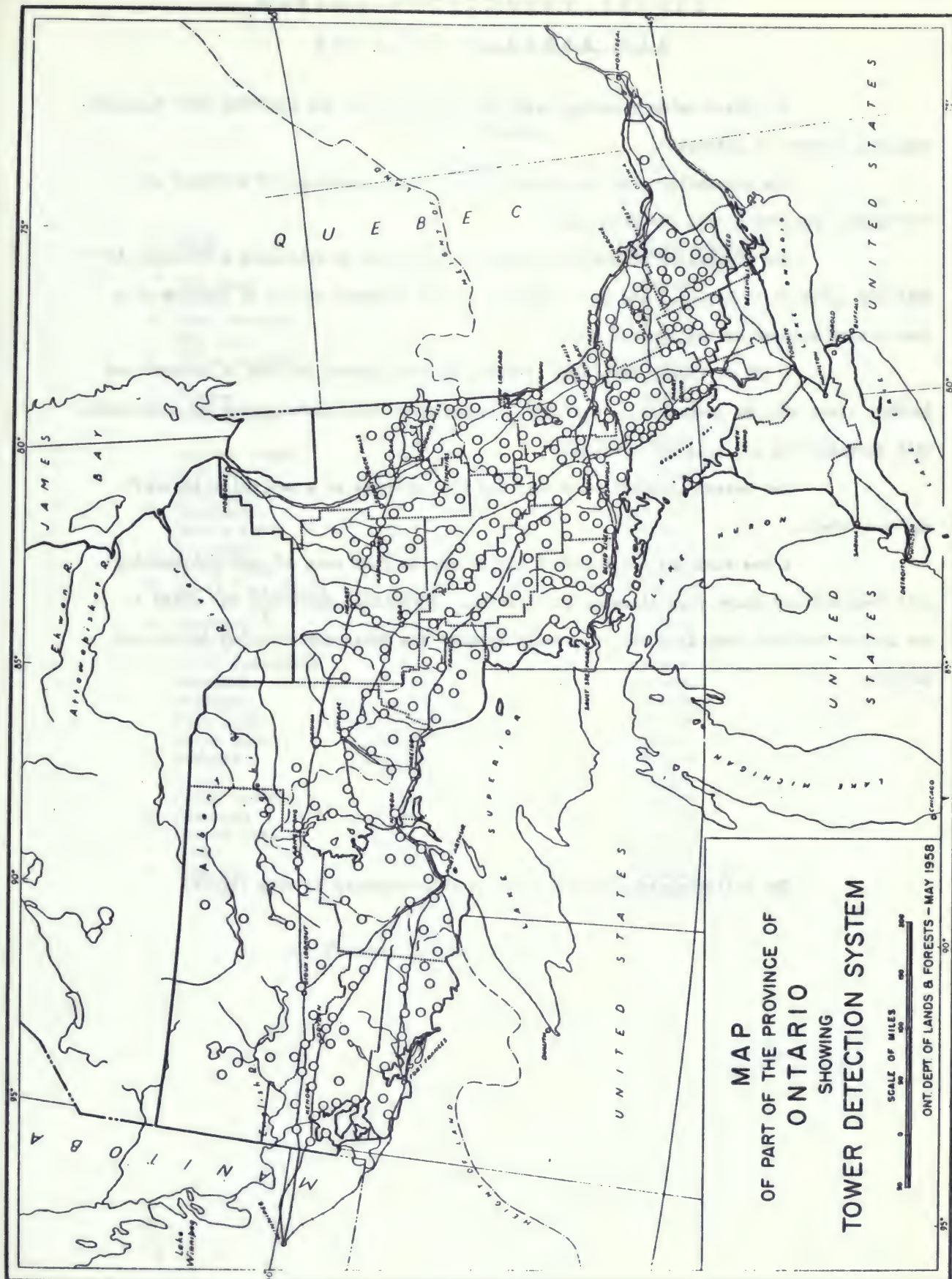
NUMBER OF FIRES - MAN CAUSED AND LIGHTNING

YEARS 1941-1960

NUMBER
OF FIRES







FOREST PROTECTION BRANCH
AIR SERVICE SECTION

All Otter water dropping tanks were streamlined and modified from manually operated dumping to automatic.

The streamlining of the tanks resulted in an increase of airspeed and consequent improved flying performance.

The mechanical method of dumping was replaced by utilizing a solenoid to trip the latch on each tank. The pilot controlled the solenoid action by the use of a push button located on the control wheel.

A set of Beaver tanks was reversed to turn inward instead of outward and further tests will be conducted to evaluate the merits of this installation in combination with streamlining and solenoid operated.

Two Beaver aircraft were sold and the purchase of a new Otter aircraft was concluded.

A new shop was activated in our Hangar to take care of janitrol heating unit overhaul and spark plug cleaning and testing. Additional equipment was added to our Engine Overhaul Shop in order to greatly improve the detection of metal cracks and defects.

The following reports are added as supplementary to this report:

TABLE 1
Operating Bases
1960-61

<u>BASE</u>	<u>TYPE OF AIRCRAFT</u>
Red Lake	Beaver
* Kenora	Beaver (2)
* Fort Frances	Beaver
Nym Lake	Beaver
* Sioux Lookout	Beaver
	Otter
Ignace	Beaver
* Port Arthur	Beaver
	Otter
Caribou Lake	Beaver
Pays Plat	Beaver
Twin Lakes	Beaver
* Geraldton	Otter
Pickle Lake	Otter
Oba Lake	Beaver
White River	Beaver
* Sault Ste. Marie	Beaver
	Otter
* Chapleau	Beaver
* Gogama	Beaver
South Porcupine	Otter
Temagami	Beaver
Kenogami	Beaver
Remi Lake	Beaver
Carey Lake	Beaver
* Sudbury	Beaver
	Otter
Parry Sound	Beaver
* Pembroke	Beaver
Lauzon Lake	Beaver
Tweed	Beaver
* Toronto	Beaver (2)
	Widgeon

* - Denotes Year-round Bases

TABLE 11

Transport Aircraft - Effective Loads Carried

1960-61

<u>Aircraft</u>	<u>Hours Flown</u>		<u>Effective Loads</u>
<u>BEAVER</u>			
CF-OBS	264:05	162,885 lbs.	81 tons, 885 lbs.
CF-OBV	230:55	227,452 lbs.	113 tons, 1452 lbs.
CF-OBV	5:40	1,010 lbs.	1010 lbs.
CF-OBW	87:45	44,145 lbs.	22 tons, 145 lbs.
CF-OBX	63:05	148,685 lbs.	74 tons, 685 lbs.
CF-OBZ	3:00	1,200 lbs.	1200 lbs.
CF-OBZ	318:25	162,111 lbs.	81 tons, 111 lbs.
CF-OCA	354:55	181,461 lbs.	90 tons, 1461 lbs.
CF-OCB	332:05	409,151 lbs.	204 tons, 1151 lbs.
CF-OCC	196:15	97,675 lbs.	48 tons, 1675 lbs.
CF- OCD	213:10	109,444 lbs.	54 tons, 1444 lbs.
CF-OCE	279:30	199,442 lbs.	99 tons, 1442 lbs.
CF-OCG	256:00	117,870 lbs.	58 tons, 1870 lbs.
CF-OCH	475:50	217,857 lbs.	108 tons, 1857 lbs.
CF-OCJ	343:05	206,297 lbs.	103 tons, 297 lbs.
CF-OCK	336:15	248,950 lbs.	124 tons, 950 lbs.
CF-OCL	200:00	101,280 lbs.	50 tons, 1280 lbs.
CF-OCN	309:30	189,266 lbs.	94 tons, 1266 lbs.
CF-OCO	451:30	320,501 lbs.	160 tons, 501 lbs.
CF-OCQ	600:45	386,970 lbs.	193 tons, 970 lbs.
CF-OCQ	345:00	233,880 lbs.	116 tons, 1880 lbs.
CF-OCS	141:00	42,295 lbs.	21 tons, 295 lbs.
CF-OCT	349:30	192,813 lbs.	96 tons, 813 lbs.
CF-OCU	290:10	226,690 lbs.	113 tons, 690 lbs.
CF-OCV	334:25	184,435 lbs.	92 tons, 435 lbs.
CF-OCX	501:35	466,646 lbs.	233 tons, 646 lbs.
CF-OCY	258:30	164,945 lbs.	82 tons, 945 lbs.
CF-OCZ	136:40	125,930 lbs.	62 tons, 1930 lbs.
CF-ODA	89:15	19,335 lbs.	9 tons, 1335 lbs.
CF-ODB	316:50	215,136 lbs.	107 tons, 1136 lbs.
CF-ODC	573:25	297,881 lbs.	148 tons, 1881 lbs.
CF-ODD	42:45	9,795 lbs.	4 tons, 1795 lbs.
CF-ODE	455:30	116,785 lbs.	58 tons, 785 lbs.
CF-ODF	303:10	165,852 lbs.	82 tons, 1852 lbs.
CF-ODG	467:00	226,675 lbs.	113 tons, 675 lbs.
CF-ODO	106:30	26,957 lbs.	13 tons, 957 lbs.
CF-ODS	84:40	21,580 lbs.	10 tons, 1580 lbs.
<u>OTTER</u>			
CF-ODJ	353:55	474,660 lbs.	237 tons, 660 lbs.
CF-ODK	228:35	363,149 lbs.	181 tons, 1149 lbs.
CF-ODL	287:00	485,590 lbs.	242 tons, 1590 lbs.
CF-ODP	269:40	356,637 lbs.	178 tons, 637 lbs.
CF-ODQ	293:10	302,730 lbs.	151 tons, 730 lbs.
CF-ODT	576:50	708,325 lbs.	354 tons, 325 lbs.
CF-ODU	224:45	276,387 lbs.	138 tons, 387 lbs.
<u>WIDGEON</u>			
CF-ODR	216:55	38,215 lbs.	19 tons, 215 lbs.

Total Transport Section:-

Total Flying time, Hours:	12,568:30
Total Loading, lbs.:	9,276,975 lbs.
Total Loading, tons:	4,638 tons, 975 lbs.

TABLE III

Hours Flown on Various Phases of Flying Operations

	<u>1949-60</u>	<u>1960-61</u>	<u>Total</u>
Fire Ranging (Detection and Suppression)	64,031:35	4,914:10	68,945:45
Timber Management	9,530:30	965:05	10,495:35
Fish and Wildlife	26,716:50	3,454:55	30,171:45
Lands	2,276:45	267:25	2,544:10
Parks	928:20	255:10	1,183:30
Commercial Flying	3,885:05	469:40	4,354:45
Administration	34,106:05	2,242:05	36,348:10
	<u>141,475:10</u>	<u>12,568:30</u>	<u>154,043:40</u>

Break-Down of Administration

	<u>1960-61</u>
Mercy Flights	72:20
Tests (Radio and Aircraft)	83:40
Ferrying and Instruction	206:35
Research, Incl. Entomology and Dusting	200:10
Forced Landings and Operations	272:00
Transportation Ordinary	969:40
Transportation Special	434:05
Photography	—
Surveys	3:35
	<u>2,242:05</u>

TABLE IV

Passengers and Personnel Carried

	<u>1924-60</u>	<u>1960-61</u>	<u>Total</u>
Passengers Carried	499,123	29,069	528,192
Personnel Carried	151,024	4,833	155,857
Total Passengers and Personnel Carried	650,147	33,902	684,049
Effective Loads Flown, lbs.	141,622,331	9,276,975	150,899,306
Effective Loads Flown, Tons	70,811 tons 331 lbs.	4,638 tons 975 lbs.	75,449 tons 1,306 lbs.

TABLE V
Hours Flown at Bases
1960-61

<u>BASE</u>	<u>HOURS FLOWN</u>
Carey Lake	150:25
Caribou Lake	492:10
Chapleau	367:30
Fort Frances	688:30
Geraldton	341:35
Gogama	464:30
Ignace	193:20
Kenogami	202:40
Kenora	755:10
Lauzon Lake	264:30
Nym Lake	316:40
Oba Lake	206:10
Pays Plat	342:05
Parry Sound	237:45
Pickle Lake	394:30
Port Arthur	750:45
Pembroke	492:40
Red Lake	336:30
Remi Lake	283:55
Sault Ste. Marie	577:00
Sioux Lookout	815:10
South Porcupine	220:50
Sudbury	408:55
Temagami	263:55
Twin Lakes	244:40
Toronto	354:10
White River	234:45
Tweed	444:40
Air Service Operations, Testing, Ferrying, etc.	1,723.05
	<hr/>
	12,568:30

T A B L E VI

Flying Time - Pilots

<u>PILOTS</u>		<u>1924-60</u>	<u>1960-61</u>	<u>Total</u>
Allen	DW	2,220:30	213:45	2,434:15
Ballantyne	DE	1,251:20	292:20	1,543:40
Beaushene	GD	2,688:50	355:45	3,044:35
Bieck	AH	591:00	522:30	1,113:30
Burt	AE	7,324:50	366:50	7,691:40
Calver	DH	2,491:20	403:25	2,894:40
Campbell	GE	3,832:40	501:35	4,334:15
Colfer	AP	5,154:20	721:35	5,875:55
Cooke	TC	5,753:20	575:45	6,329:05
Cram	WW	654:25	258:00	912:25
Croft	BR	751:55	366:30	1,118:25
Croal	DM	643:20	359:25	1,002:45
Denley	JG	6,851:35	313:50	7,165:25
Evans	FB	3,770:30	311:55	4,082:25
Fiskar	UW	3,121:25	364:15	3,485:40
Glennie	NA	1,773:45	396:25	2,170:10
Hoar	HA	2,593:40	201:40	2,795:20
Hoeborg	PS	2,510:05	315:20	2,825:25
Hugill	WA	1,893:20	301:45	2,195:05
Kincaid	J	6,629:20	452:50	7,082:10
Kirk	CJ	4,094:35	360:10	4,454:45
Lamont	JA	3,122:05	281:55	3,404:00
LeFeuvre	CJ	8,299:05	359:25	8,658:30
Lowe	B	1,020:00	259:25	1,279:25
McDougall	FA	4,976:20	95:25	5,071:45
North	DH	536:35	356:25	893:00
Parsons	R	6,947:30	258:50	7,206:20
Poulin	LD	7,563:40	201:10	7,764:50
Ponsford	GE	1,480:55	10:10	1,491:05
Reid	DM	3,856:00	338:15	4,184:15
Siegel	J	4,470:15	347:05	4,817:20
Speight	HC	6,626:05	576:50	7,202:55
Smith	AB	6,736:55	314:00	7,050:55
Taylor	JM	3,395:55	66:05	3,462:00
Thomas	E	3,024:05	333:05	3,357:10
Thompson	GE	2,133:05	265:50	2,398:55
Trussler	LG	6,974:15	287:30	7,261:45
Turcotte		699:15	261:30	960:45
Other Pilots		178,316:45		178,316:45
		316,764:50	12,568:30	329,333:20

TABLE VII

Flying Time - Aircraft

<u>AIRCRAFT</u>	<u>1924-60</u>	<u>1960-61</u>	<u>TOTAL</u>
<u>Beaver</u>			
CF-OBS	4,428:05	264:05	4,692:10
CF-OBU	3,751:40	230:55	3,982:35
CF-OBV	3,880:15	5:40	3,885:55
CF-OBW	3,438:55	87:45	3,526:40
CF-OBX	4,020:25	63:05	4,083:30
CF-OBY	3,635:45	3:00	3,638:45
CF-OBZ	3,766:55	318:25	4,085:20
CF-OCA	3,279:45	354:55	3,634:40
CF-OCB	3,917:35	332:05	4,249:40
CF-OCB	3,544:25	196:15	3,740:40
CF-OCB	3,254:55	213:10	3,468:05
CF-OCE	4,024:15	279:30	4,303:45
CF-OCG	3,105:00	256:00	3,361:00
CF-OCH	3,186:35	475:50	3,662:25
CF-OCJ	2,878:25	343:05	3,221:30
CF-OCK	3,382:45	336:15	3,719:00
CF-OCL	3,384:30	200:00	3,584:30
CF-OCN	3,724:15	309:30	4,033:45
CF-OCO	3,414:55	451:30	3,866:25
CF-OCF	3,423:20	600:45	4,024:05
CF-OCQ	3,851:15	345:00	4,196:15
CF-OCS	3,870:05	141:00	4,011:05
CF-OCT	3,460:15	349:30	3,809:45
CF-OCU	3,343:40	290:10	3,633:50
CF-OCV	2,511:40	334:25	2,846:05
CF-OCX	2,714:15	501:35	3,215:50
CF-OCY	2,779:45	258:30	3,038:15
CF-OCZ	2,226:55	136:40	2,363:35
CF-ODA	2,841:15	89:15	2,930:30
CF-ODB	3,231:15	316:50	3,548:05
CF-ODC	3,711:05	573:25	4,284:30
CF-ODD	795:30	42:45	838:15
CF-ODE	2,092:40	455:30	2,548:10
CF-ODF	2,886:35	303:10	3,189:45
CF-ODG	2,811:50	467:00	3,278:50
CF-ODO	498:45	106:30	605:15
CF-ODS	238:55	84:40	323:35
<u>Otter</u>			
CF-ODJ	1,767:05	353:55	2,121:00
CF-ODK	1,920:55	228:35	2,149:30
CF-ODL	1,805:45	287:00	2,092:45
CF-ODP	947:35	269:40	1,217:15
CF-ODQ	1,303:55	293:10	1,597:05
CF-ODT	1,238:30	576:50	1,815:20
CF-ODU		224:45	224:45
<u>Widgeon</u>			
CF-ODR	865:45	216:55	1,082:40
All Other Aircraft	190,665:55		190,665:55
	315,823:45	12,568:30	328,392:15

TABLE VIII

MERCY AND EMERGENCY FLIGHTS 1960-61

<u>DATE</u>	<u>AIRCRAFT</u>	<u>PILOT</u>	<u>JOURNEY</u>	<u>TIME</u>	<u>REASON</u>
Apr.4/60	CF-OCX	G. E. Campbell	Gogama to Sudbury to Gogama	2:00	Woman suffering from severe bleeding flown to Hospital.
Apr.8/60	CF-OCX	G. E. Campbell	Gogama to Sudbury to Gogama	1:45	Obstetrical case flown to Hospital.
June 1/60	CF-OCN	F. B. Evans	Lauzon L. to Square L. to Lauzon L.	:55	Tree Planter suf- fered injury from a fall and flown to Hospital.
June 4/60	CF-OCX	G.E. Campbell	Gogama to South Porcu- pine to Gogama	1:10	Woman suffering from appendicitis taken from CNR Passenger train thence to Hospital.
June 1/60	CF-OCK	D. M. Reid	Nym L. to Pickerel L. to Nym L.	:20	Man at Pickerel L. suffered heart attack and flown to Hospital.
June 10/60	CF-OCX	G. E. Campbell	Gogama to Sudbury to Gogama	1:45	Woman seriously ill flown to Hospital.
July 17/60	CF-OCC	L. D. Poulin	Carey L. to Remi L. to Carey Lake	1:45	Injured child flown to hospital for treatment.
July 26/60	CF-OCK	D. M. Reid	Nym L. to Elizabeth L. to Nym L.	:45	Boy Scout suffered appendicitis attack flown to hospital.
July 26/60	CF-ODC	T. C. Cooke	Otterslide L. to Huntsville	:45	Boy Scout fell on trail and injured his arm which re- quired treatment.
Aug.4/60	CF-OCN	F. B. Evans	Lauzon L. to Toronto to Lauzon L.	5:20	Man seriously crushed in mine accident flown to hospital.
Aug.11/60	CF-OCN	F. B. Evans	Lauzon to Matinenda to Lauzon	:25	Victims of carbon monoxide fumes flown to medical aid.
Aug.27/60	CF-OCZ	W. W. Cram	Franz to Wawa to Franz	:40	Man unconscious from serious illness and flown to hospital.
Sept.1/60	CF-OCF	A. P. Colfer	Fort Frances to Cabin 16 to Fort Frances	1:35	Polio case flown to hospital.
Sept.3/60	CF-OCK	D. M. Reid	Nym L. to Sunday L. to Prairie Portage to Nym Lake	1:05	Man in diabetic coma flown from Sunday L. to Prairie Portage from where he could be transported to hospital at Minnesota.

TABLE VIII - Continued

MERCY AND EMERGENCY FLIGHTS 1960-61

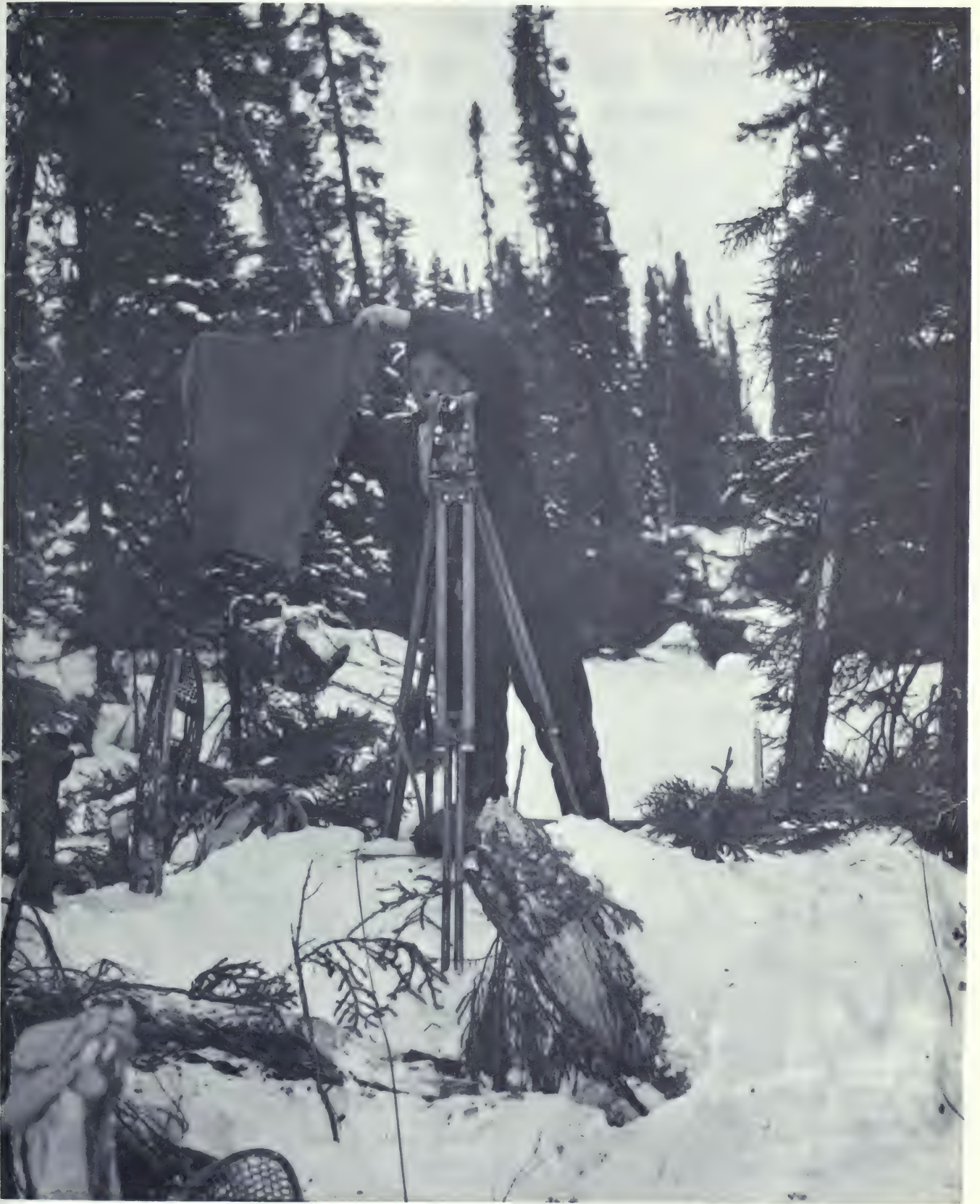
<u>DATE</u>	<u>AIRCRAFT</u>	<u>PILOT</u>	<u>JOURNEY</u>	<u>TIME</u>	<u>REASON</u>
Sept. 4/60	CF-OCX	G. E. Campbell	Gogama to Sudbury to Gogama	1:40	Baby seriously ill flown to hospital.
Sept. 5/60	CF-OCX	G. E. Campbell	Gogama to Marne to South Porcupine to Gogama	1:20	Man suffering severe abdominal pains flown to hospital.
Sept. 18/60	CF-OCX	G. E. Campbell	Gogama to South Porcupine to Gogama	1:10	Car accident victim flown to South Porcupine.
Oct. 8/60	CF-OCU	D.E. Ballantyne	Trout L. to Parry Sound	:15	Three men flown to medical aid after aircraft crashed.
Oct. 20/60	CF-OCX	G.E. Campbell	Gogama to Ruel to Sudbury to Gogama	1:15	Man with very high fever flown to hospital.
Jan. 13/61	CF-OCX	G. E. Campbell	Gogama to South Porcupine to Gogama	1:15	Confinement case flown to South Porcupine Hospital
Mar. 24/61	CF-OCX	G. E. Campbell	Mattagami to South Porcupine	:45	Man suffering from pleurisy taken to hospital.

In addition to the above, a considerable amount of flying hours was carried out in the Spring of 1960, all of which was of an emergency or mercy flight nature in connection with the Foleyet flood.

LANDS AND SURVEYS BRANCH

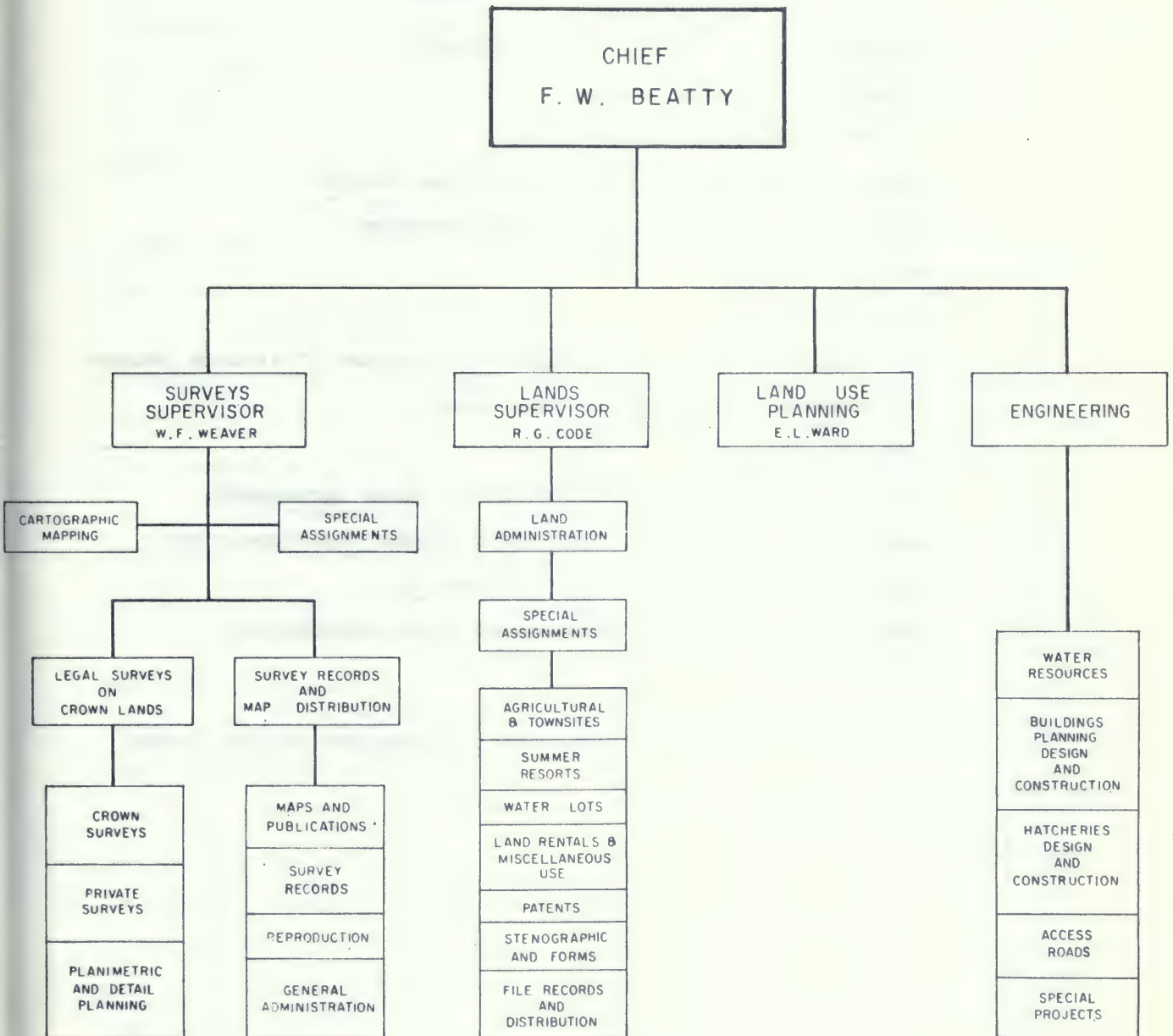


The sale of Crown lands for cottage sites has become an important part of lands administration. Above: an improved cottage site.



Signalling to forward Station on Winter Meridian Survey Line.

ONTARIO
DEPARTMENT OF LANDS AND FORESTS
LANDS AND SURVEYS BRANCH
ORGANIZATION CHART



LANDS AND SURVEYS BRANCH

The Branch is comprised of two sections: Surveys and Lands.

RESPONSIBILITIES AND FUNCTIONS

Survey of Crown lands for disposition;
Survey of provincial parks;
Survey of provincial boundaries;
Resurvey of obliterated original Crown surveys;
Custody and reproduction of survey records;
Map compilation;
Map distribution;
Sales and leases of Crown lands and issuance of letters patent;
Records of disposition of Crown lands;
Land use planning;
Issuance and renewals of water power lease agreements;
Inspection of dams - The Lakes and Rivers Improvement Act;
Plans of buildings for field offices, etc.;
Plans for construction and renovation of hatcheries;
Access roads;

The details of the activities of the branches are set forth in the detailed reports which follow.

SURVEYS SECTION

The policy of planning and subdividing Crown land for disposition by reference to registered plans of subdivision was continued. During the past fiscal year, 149 subdivisions, comprising some 1,939 lots were surveyed under survey instructions issued by the Surveys Section, as compared to 1,865 lots surveyed the previous year.

In the year 1958, the policy of surveying individual summer resort locations following the acceptance of an application to purchase, was discontinued as far as conditions would permit. In the past three years following the department's new policy of selling land by reference to registered plans of subdivisions, 296 subdivisions totalling 5,000 lots were surveyed and the plans registered.

It is of interest to note that in the year 1957, there were 1,571 summer resort locations surveyed individually as compared with 662 surveyed last year.

Surveys of 2,935 summer resort locations and comprising 2,273 locations on subdivision plans and 662 individual surveys were examined during the past fiscal year. This figure represents an increase of 275 over the previous all-time high in the fiscal year ending March 31st, 1959.

Retracement surveys of obliterated original surveys were increased by reason of the development of summer resort land, mining and timber operations. Approximately 170 miles of retracement surveys were completed.

Map No. 47A of Algonquin Provincial Park, scale 2 miles to 1 inch, and being a completely new edition, was published. One of the features of this map which has proved very popular is the location of the established canoe routes through the park.

In anticipation of the large number of tourists through what was formerly known as the "Gap" between Sault Ste. Marie and the Lakehead on the King's Highway No. 17, two new maps were prepared: Map No. T2210, covering Lake Superior Provincial Park, on a scale of 1 mile to 1 inch, and Map No. T2800, on a scale of 8 miles to 1 inch, which covers Highway No. 17 between Sault Ste. Marie and Port Arthur - Fort William; Map No. T2800 is a general information map which should prove most useful to the tourists.

Details of the activities of the Surveys Section are as follows:

LEGAL SURVEYS

Survey instructions issued during the period April 1st, 1960, to March 31st, 1961:

Meridian Surveys

No survey instructions were issued for the survey of Base or Meridian Lines during the fiscal year.

Special Retracement Surveys

1. Re-establishment of certain corners of lot 14, concessions V and VI, Township of Chandos, County of Peterborough, to facilitate the establishment of a private park. A portion of the cost of survey to be borne by the Crown.
2. Resurvey of certain lot corners of Registered Plan M4, Mining Location 86Pl, District of Kenora, on Lake of the Woods, for summer resort use.
3. Re-establishment of a portion of the allowance for road between concessions VII and VIII, Township of Methuen, County of Peterborough.
4. Re-establishment of certain road allowances in concessions IV, V, VI and VII, and survey of a portion of the blind line between concessions V and VI, Township of Carling, District of Parry Sound, to facilitate the disposition of summer resort lands.

Summer Resort Subdivision Surveys

1. Dog Lake, Township of Fowler, District of Thunder Bay.
- 2.(a) East Bull Lake, Township 123, and Madawason Lake, Township 125, District of Algoma;
(b) Muskosung Lake, Township of Badgerow, District of Nipissing.
- 3.(a) McConnell Lake, Township of Boys;
(b) Rush Bay, Lake of the Woods, Townships of Boys and Forgie;
(c) Royal Lake, Township of Ewart;
(d) Heronry Lake, Township of Godson;
(e) Whitefish Bay, Lake of the Woods, Townships of McGeorge and Willingdon;
(f) Catherine and Catastrophe Lakes, Township of Pelican;
(g) Black Lake, Township of Work,
all in the District of Kenora.
4. Rice Bay, Rainy Lake, Township of Watten, District of Rainy River.
5. Eagle Lake, Township of Aubrey, District of Kenora.
6. Black Sturgeon and Island Lakes, Township of Haycock;
Winnipeg River, Township of Pellatt;
Willard Lake, Township of MacNicol,
District of Kenora.
7. Rainy Lake, Township of Watten, District of Rainy River.
8. Swell Bay and Red Gut Bay, Township of Halkirk, District of Rainy River.
9. Eva Lake, south of the Township of Trottier, District of Rainy River.
10. Warner Lake, south of the Township of Tanner, District of Rainy River.
11. Despair Lake, Township of Dance, District of Rainy River.

12. Walkinshaw, Hicks and McLeish Lakes, north of the Township of MacGregor, District of Thunder Bay.
13. Burchell Lake, south of the Township of Ames and Prelate Lake, west of the Township of Hardwick, District of Thunder Bay.
14. Upper Shebandowan Lake, Township of Haines, and Whitefish Lake, Township of Strange, District of Thunder Bay.
15. (a) Kawagama Lake, Township of McClintock, County of Haliburton;
(b) Silver Lake, Township of Morrison, and Nine Mile Lake, Township of Wood, District of Muskoka;
(c) Harris Lake, Township of Wallbridge, District of Parry Sound.
16. Healey Lake, Township of Conger, District of Parry Sound.
17. Bear and Kimball Lakes, Township of Livingstone, County of Haliburton.
18. Tasso and Oxbow Lakes, Township of Finlayson, District of Nipissing.
19. Osborne Lake, Township of Ballantyne, and Forest Lake, Township of Joly, District of Parry Sound.
20. Seven Mile Narrows and Island B704, Township of Cowper, District of Parry Sound.
21. Wangoon Lake, Township 32, District of Sudbury.
22. (Nameless) Lake, Township of McCart, District of Cochrane.
23. Star Lake, Township of Keefer, and Kenogamissi Lake, Township of McKeown, District of Cochrane.
24. (a) Bear Lake, Township of Monteith, District of Parry Sound;
(b) Kashe Lake, Township of Morrison, District of Muskoka.
25. Crane Lake, Township of Conger, and Shebeshekong Bay and Squaw, Huckleberry, and Pleasant Islands, Township of Carling, District of Parry Sound.
26. Papineau Lake, Townships of Bangor and Wicklow, County of Hastings.
27. Mountain and Fortescue Lakes, Township of Cavendish, and Koshlong Lake, Township of Glamorgan, County of Haliburton.
28. Raven Lake, Township of Sherborne, County of Haliburton.
29. Paudash Lake, Township of Cardiff, County of Haliburton.
30. Ashby Lake, Township of Ashby, County of Lennox and Addington.
31. Pagwachuan Lake, south of the Township of Fernow, and Hutchinson Lake, Township of Fulford, District of Thunder Bay.
32. (a) Greenbough Lake, Township of Clara, and Smith Lake, Township of Head, County of Renfrew.
(b) McCauley Lake, Townships of Murchison and Airy, District of Nipissing.
33. Wakwekobi Lake, Township of Day, District of Algoma.
34. Carson Lake, Townships of Jones and Sherwood, and Wolf Lake, Township of Jones, County of Renfrew.
35. Garden Lake, Township 202, District of Algoma.
36. Achigan Lake, Township of Marne, District of Algoma.

- 37.(a) Islands L and M, Lake Nipissing, Township of Haddo, District of Sudbury;
(b) Tomiko Lake, Township of Grant, and Tilden Lake, Township of Gladman, District of Nipissing.
38. Remi Lake, Township of Fauquier, District of Cochrane.
- 39.(a) Remi Lake, Township of Fauquier, District of Cochrane;
(b) Big Skunk Lake, Township of Arnott, District of Algoma.
40. Bonner Lake, Township of Fauquier, and Gravel Lake, Township of O'Brien, District of Cochrane.
- 41.(a) Ironside Lake, Township of Hutton, District of Sudbury;
(b) Johnnie Lake, Township of Carlyle, District of Manitoulin.
- 42.(a) Stratton Lake, Township of Foster;
(b) Hannah Lake, Townships of Foster and Curtin;
(c) Panache Lake, Township of Caen;
(d) Panache Lake, Township of Dieppe;
(e) Matagamisi Lake, Township of Rathbun;
(f) Kukagami Lake, Townships of Rathbun and Kelly;
(g) Trout Lake, Township of Cherriman;
(h) Ashigami and Wanapitei Lakes, Township of Scadding;
in the District of Sudbury.
43. Weckstrom Lake, Township of Shields, District of Algoma.
44. Diamond Lake, Township of Johnson, District of Algoma.
45. Dunlop Lake, Township 150, District of Algoma.
- 46.(a) Catfish Lake, Township 30, Range 24; Fungus and Kabenung Lakes, Township 31, Range 27; Picnic Lake, Township of Hunt, in the District of Algoma;
(b) Dunc and White Lakes, north of Township 71, District of Thunder Bay.
47. Buckshot Lake, Township of Miller, County of Frontenac.
48. Watabeag Lake, Township of Nordica, District of Timiskaming.
49. Howard Lake, Township of Arnold, District of Timiskaming.
50. Gowganda Lake, Township of Nicol; Montreal River, Township of James; St. Anthony Lake, Township of Skead; Wendigo Lake, Township of Bayly, in the District of Timiskaming.
51. Clarendon and Kashawakamak Lakes, Township of Barrie; White Lake, Townships of Darling and Bagot; Wensley Lake, Township of Miller; Weslemkoon Lake, Township of Ashby; Coxvale Lake, Township of Clarendon; Scully Lake, Township of Brougham, in the Counties of Frontenac, Lanark, Renfrew and Lennox and Addington.
- 52.(a) Marchington Lake at Ghost River Station, District of Kenora;
(b) Waweig Lake, south of Armstrong, District of Thunder Bay.
53. Miller Bay of Rainy Lake, Township of Watten, District of Rainy River.
54. Minisinakwa River, Township of Mattagami; Houston Lake, Township of Macmurchy; Mesomikenda Lake, Township of Neville, District of Sudbury.
- 55.(a) Severn River, Township of Matchedash, County of Simcoe;
(b) Severn River, Townships of Wood and Baxter, and Baxter Lake, Township of Baxter, District of Muskoka.
56. One Island Lake, Township of Fowler, District of Thunder Bay.
57. Remi Lake, Township of Fauquier, District of Cochrane.

58. Capreol Lake, Township of Capreol, District of Sudbury.

59. Georgian Bay, Township of Gibson, District of Muskoka.

Municipal Surveys

1. Re-establishment and monumentation of certain lot corners in lots 19 and 20, Range East of the Muskoka Road, Township of Morrison, District of Muskoka.
2. Re-issuance of instructions issued in 1953 to re-establish and monument certain corners in certain lots of Registered Plan M38, Town of Kenora, District of Kenora.
3. Re-establishment and monumentation of the boundary between the Township of Richmond and the westerly limit of the Town of Napanee.

Miscellaneous Surveys

1. Inspection of subdivision surveys in the District of Rainy River.
2. Boundaries and miscellaneous surveys of certain provincial parks, acquired and being acquired by the Province of Ontario.
3. Survey of a portion of lot 14, concession VI, Township of Kennebec, for agricultural use.
4. Survey of locations on Dunlop Lake, Township 150, District of Algoma, for commercial use.
5. Survey of the boundaries of an extension to John E. Pearce Provincial Park, Township of Dunwich, County of Elgin.

Details of the number of survey plans of summer resort locations which were examined during the fiscal year and which were surveyed as individual location surveys or into subdivision unit plans are as follows:

Administrative District	<u>Individual Parcels</u>		<u>Subdivision Plans</u>			Total
	Crown Survey Fee Paid	Private Survey No Fee	Crown Survey Fee Paid	Survey No Fee	Paid	
Chapleau		1		23		24
Cochrane		21		10		31
Fort Frances	1	35		78		114
Geraldton		5		35		40
Kapuskasing		2		91		93
Kenora		114		79		193
Lindsay	14	14	17	158		203
North Bay	11	36	6	41		94
Parry Sound	32	80	9	589		710
Pembroke	8	6	3	99		116
Port Arthur		15		184		199
Sault Ste. Marie		14	1	19		34
Simcoe	1	8				9
Sioux Lookout		4				4
Sudbury	81	76	10	100		267
Swastika		15		30		45
Tweed	6	56	26	439		527
White River		6		226		232
Totals:	154	508	72	2201		2935

The above includes 171 plans of subdivision containing 2,273 lots.

Provincial Park Surveys

The survey for internal improvements was carried out in six provincial parks; namely, Grundy Lake, Killbear, Pinery, Presqu'ile, Fairbank and Windy Lake. Partial boundary surveys were carried out in the Fairbank and John E. Pearce Provincial Parks.

Natural Gas Pipe Line Surveys

The surveys of the right of way for the 30 inch natural gas line constructed on Crown lands in Ontario have been completed and the survey plans approved for those portions of the right of way lying north and west of the Territorial District of Nipissing. During the year, 166 survey plans of the right of way were examined and approved.

Federal Harbours

Composite plans were completed of the harbours claimed by the Government of Canada as "Federal Harbours", showing all water lots alienated by the Government of Ontario and which will be honoured in a Federal-Provincial Agreement.

Similarly, the Government of Canada submitted plans of water lots alienated by the Government of Canada in harbours which are not claimed as "Federal Harbours" and which will be honoured by Ontario in the Federal-Provincial Agreement.

Federal Crown Surveys

The following surveys were made by the Department of Mines and Technical Surveys on Crown lands (Canada):

1. Fort William Indian Reserve No. 52 - partial retracement survey of boundaries, District of Thunder Bay.
2. Kenora Indian Reserve No. 38B - partial retracement survey of boundaries, District of Kenora.
3. Golden Lake Indian Reserve No. 39 - completion of resurvey of entire reserve, County of Renfrew.
4. Mattagami Indian Reserve No. 71 - subdivision survey of 40 lots within the reserve, District of Sudbury.
5. Caradoc Indian Reserve No. 42 - subdivision survey of part of Lot G, Range VII East, within the reserve, County of Middlesex.
6. Oneida Indian Reserve No. 41 - road diversion survey in lot 21, concession C, County of Middlesex.

7. Six Nations Indian Reserve No. 40 - road widening survey of the road allowance between concessions IV and V across lots 1 - 6, Township of Oneida, and across lots 1 - 18, Township of Tuscarora, Counties of Brant and Haldimand.
8. Cornwall Island Indian Reserve No. 59 - partial resurvey and subdivision, County of Stormont.
9. Survey of the Fort Malden historic site at Amherstburg, Ontario.
10. Survey of a hydrographic station site at Riverside, Ontario.

Geographic and Map Publications

The reproduction of the new base for Map No. 47A Algonquin Provincial Park, scale 2 miles to 1 inch, was completed. The basic outline of this new map is in two colours, black and dark blue. An added feature is that established canoe routes through the park area are shown; 25,000 copies were reproduced in four colours.

A reprint edition of Map 32A - Districts of Algoma and Sudbury, (7,500 copies) was reproduced from existing lithographic press plates.

The basic drawings for two of the Territorial Series were completed in readiness for reproduction, (a) Map No. 22 - Districts of Algoma, Sudbury and Timiskaming; (b) Map No. 25 - District of Cochrane. The reproduction of both new map sheets will be held in abeyance until 1961-62 thus allowing the balance of our old Map No. 24B - Part of Northern Ontario, to be distributed. The two new maps will then supersede the present Map No. 24B.

The compilation and drawing of a new base for the Territorial Series Map No. 24 - Districts of Kenora and Rainy River, was started in May, 1960, and it is anticipated that this new map will be completed in readiness for reproduction about January, 1962. The new base map outlines will appear in two colours, black and dark blue, instead of black only, in accordance with the existing design for maps of this series.

Editing of Geographical Nomenclature on Maps

At the request of the Canadian Board on Geographical Names, Ottawa, other departments and agencies of the provincial and federal governments, a number of maps were checked re established and new nomenclature prior to publication.

The major groupings were:

Maps of the National Topographic Series published by the Department of Mines and Technical Surveys, Ottawa - 34 sheets, most of which were at the map scale of 1/50,000;

Two of the charts to be issued by the Canadian Hydrographic Service;

Eight large geological maps to be published by the Ontario Department of Mines;

Four other miscellaneous maps were checked in a similar manner;

Some 25 N.T.S. maps were checked re names and additional items of information required for the Ontario portion of the "Gazetteer of Canada" now being prepared by the Canadian Board on Geographical Names.

Reference Library Information

The Index of Geographical Names in Ontario continues to expand by way of new and revised card entries, re new nomenclature; 5,000 entries were added and some 10,000 previous entries were revised during the 1960-61 fiscal year. During this period, a micro-film record was made of the existing entries so that a record can be safely kept in the event of possible destruction of the original index. All additional or changed entries will be periodically photographed in the same manner prior to being incorporated in the main index.

Planimetric Detail Maps

The following detailed planimetric maps were prepared:

Area or Grid Maps	-	88
Township Maps	-	12
Composite Maps	-	19
Miscellaneous Maps	-	46

General Administration, Map Distribution and Survey Records

Map Distribution

A total of 16,816 copies of lithographed district and miscellaneous maps produced by this department were distributed this fiscal year, of which 1,700 copies were for the "official use" of this and other departments of the provincial and federal governments (see "Trend of Map Distribution Charts").

The map sheets of the National Topographic Series produced and distributed by the Federal Department of Mines and Technical Surveys, as well as the sheets produced by the Army Survey Establishment Bureau of the

Department of National Defence, Ottawa, for resale purposes, or for the "official use" of this and other departments of the Ontario Provincial Government were distributed in the total quantity of 36,993 copies (see "Trend of Map Distribution Chart"). Of the total distributed, 12,271 copies were supplied for the "official use" of this department, including district offices, by the Department of Mines and Technical Surveys without charge and 13,715 copies were purchased directly by district offices for resale purposes. This figure is not included in the total overall distribution figure for this branch. Increased production of new and converted map sheets to the 1:50,000 scale by the Federal Department of Mines and Technical Surveys, was noted.

The demand for copies of the Lake Simcoe and Trent Canal Nautical (Marine) Charts published by the Canadian Hydrographic Service, continues to increase; 372 copies were distributed, but this figure is not shown in the total overall map distribution figure.

The popularity of the provincial topographic lithographed map sheets on the scale of 2 miles to 1 inch, continues to increase. These map sheets are produced by the Army Survey Establishment Bureau, Department of National Defence, Ottawa, from aerial photographic information made under the Forest Resources Inventory Programme of the Timber Branch for this department. Due to other commitments, the conversion of mapping to the 1:50,000 scale, the Army Survey Establishment Bureau were unable to produce any new sheets in this series for this department this year.

Twenty-six thousand, one hundred and eleven copies (see "Trend of Map Distribution Chart") of this series were distributed, an increase of 754 copies over that of the previous fiscal year.

The summary of the total quantity of lithographed map sheets distributed, is as follows:

National Topographic Series	-	63,104
Map No. 20	-	1,333
District Maps	-	6,906
Map No. 33A - Electoral	-	142
Map No. 28 - Geographical Townships	-	530
Island Maps	-	219
Miscellaneous Maps	-	7,686
		<hr/>

Total: 79,920

A decrease of 400 "over the counter" individual cash sales was noted against that of the previous fiscal year, for a total of 8,000 transactions for the sale of lithographed map sheets, reproductions of survey records and other maps and plans; 788 counter invoices for items sent out on credit were issued; 8,000 letters of request from the public, covering similar transactions, were processed.

Reproductions

27,510 square feet of photographic reproduction paper was consumed for reproductions of maps and survey records for departmental work, the survey branches of The Ontario Hydro-Electric Power Commission and the Ontario Department of Highways, other provincial government departments and commissions, Ontario Land Surveyors and the general public. This was 2,429 square feet more than that used in the previous year.

A decrease is to be noted in the consumption of sensitized paper used in the reproduction of various topographic map tracings, Crown land tracings and township prints, Georgian Bay Island map sheets, subdivision and summer resort plans of surveys, as well as other miscellaneous plans, by the dry process reproduction method. A total of 269,081 square feet of sensitized paper and linen was consumed, which was 53,257 square feet less than that used in the previous fiscal year. The square footage of opaque linen consumed was more than doubled due to the reproductions required for the large number of Crown subdivision plans being registered, as well as other miscellaneous plans required for patent purposes. The quantity of transparent reproduction material used shows an increase over the amount used during the past fiscal year. A summary of the dry process material used, is as follows:

Blue or black line paper	-	242,784	square feet
Transparent line - 6,510)	-		
Transparent plastic <u>1,317)</u>	-	7,827	" "
Opaque linen	-	<u>18,470</u>	" "
Total:		269,081	" "

Reproductions required for mapping projects for this branch and various district offices, required to be produced photographically by commercial firms, are not included in the above figures.

Map Mounting and Bookbinding

The following work was handled by the map mounting and bookbinding staff maintained by this section for departmental requirements including the preservation of old original survey plans.

Map Mounting -

New plans mounted	
Summer resort subdivisions and composite	520
Township - for district offices	279
Miscellaneous lithographed maps and prints	152
Old plans remounted	
Original surveys and patents plans	<u>66</u>
Total:	1,017 plans

Bookbinding

New bindings	
Field notes of current surveys	20
Miscellaneous	15
Repaired bindings	
Patent references	17
Field notes	29

Crown Survey Records

The use of original Crown survey records for reproduction or reference purposes by the survey branches of The Hydro-Electric Power Commission of Ontario, the Ontario Department of Highways, Ontario Land Surveyors in private practice and the general public, continues to increase.

925 cards were typed covering plans being recatalogued and filed in the Survey Record Catalogue along with 2,600 cards copied from information contained in the summer resort and mining location index book and filed in the surveyor's designation number card index, by casual help employed for the summer months only. In addition, approximately 1,000 entries were made in the surveyor's designation number card index of surveyed parcels, the returns of the surveys of 229 plans of subdivisions made for summer resort purposes and 242 plans of miscellaneous surveys consisting of the surveys of pipe line right of ways, access roads and composite plans made on Crown lands, other than individual summer resort location surveys, as well as 17 books of field notes were registered, catalogued and filed. The returns of one Municipal Survey also were entered into the records.

The refiling of all plans of surveys, with the exception of the plans of surveyed mining claims presently filed on current correspondence files, into the vertical filing system, was continued this fiscal year. By using a full-time staff for most of the year, more was accomplished than in the previous year. Approximately 34,000 flat, current correspondence files and thousands of old docket files were examined. This completed the examination of, and removal of plans from the old docket files prior to 1916 in the Crown Lands vault. Similar work was commenced on the old docket files in the old Surveys Branch vault. Over 13,000 plans of surveys, including any duplicate plans found, as well as 6,600 descriptions, field notes and affidavits were removed and refiled into the vertical filing system. This required the typing of 7,124 filing labels which was done partly by the summer casual help and partly by the full-time staff. All survey record material removed from the files was microfilmed.

Survey Party Equipment

Four field survey parties under staff surveyors, carrying out summer resort location subdivision surveys, retracement surveys, a control survey along the north shore of Lake Erie from Port Dover to Rondeau Provincial Park in co-operation with the Department of Mines and Technical Surveys, Ottawa, a survey of certain water lots fronting on Lake Ontario opposite the Township of Etobicoke, as well as other miscellaneous surveys, were supplied and equipped for field work. Major equipment purchased for field use included two Theodolites, one aluminum boat, two manual calculating machines, one 18 H.P. outboard motor, one gasoline driven drill, five silk tents, thirteen sleeping bags, one boat trailer, two stadia rods, two prismatic compasses, one siderial watch, several chains and tapes and other miscellaneous items.

One vehicle was renewed and the two vehicles assigned to this Section for field survey work, travelled 31,664 miles during the year.

The following quantity of survey monuments were distributed to various district offices for the use of Ontario Land Surveyors on the staff or in private practice whowere making individual or subdivision surveys for

summer resort purposes on Crown land under instructions from the Department, for municipal surveys being made under departmental instructions, or for other miscellaneous surveys.

Iron Bars

6 Inch	361	
24 Inch	3,601	
48 Inch	<u>1,278</u>	Total - 5,240

Rock Posts

Crown Lands	0
Municipal	18

Bronze Caps	
Crown lands	1,342
Municipal	31

Wooden Guide Posts	3,145
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In two districts, the wooden guide posts were made and stock-piled by the district ranger staff in slack periods; in other districts, they were purchased locally.

Accounts Payable, Supplies and Equipment

Over 1,900 invoices and accounts payable were examined, checked, recorded and classified prior to passing to the Accounts Branch for payment. These were for travel and disbursements of members of the staff, purchases made for equipment, supplies, maintenance and other operating costs and for surveys made on Crown lands by Ontario Land Surveyors in private practice. Eighty-six property receipts, transfers and write off forms were prepared for the Equipment Inventory records. Approximately 1,000 requisitions were prepared covering purchases of supplies and equipment, maintenance and other operations.

LANDS SECTION

Land Administration

The work of the Section increased in volume over the previous year. This is not reflected in the tables and graphs included in this part of the Report, which show the number of units of sale, lease, etc., completed. The increased work load is primarily the result of improved administrative procedure, more modern business practice, greater demands from the public for more and more detailed information. Legal and quasi legal matters arising as the result of increasing numbers of persons, corporations and municipalities engaging legal counsel as their contact with the Branch and a continuing interest by both visitor and citizen in the summer recreation possibilities of Ontario.

Continuous study of the effects of land administration and the reaction of the public, corporations, municipalities, the legislature and other departments of government result in improvements in procedure and amendments to legislation, regulations and policy. The following amendments were made. Subsection 1 of section 17 of The Public Lands Act was amended to remove the authority to make regulations in respect of the sale of land for agricultural purposes and to authorize the subsequent sale of land offered for sale by tender or auction and not disposed of. Agricultural lands will henceforth be disposed of on the basis of recommendations made to the Minister by the Public Lands Agricultural Committee established by new section 43B of the Act (1960-61). The amendment relating to lands offered for sale by tender or auction will permit the sale of such lands at a fair and reasonable price without resorting to regulations which fix the price. By new section 27A of the Act it is an offence to fill in water lots without authority of the Minister, and new section 27B authorizes the erection of signs on public land and makes it an offence to occupy or park on such lands. Under section 43A as amended, authority is provided to make agreements with municipalities for the management of public beaches. New section 43C authorizes the acquisition of land for various programmes of the Department.

Provision by way of policy procedure was made for the payment of

fixed charges for the preparation by the Branch for plans and/or descriptions, without requiring applicants to provide a legal survey, of certain lands for the purpose of sale, lease or patent; lessees in provincial parks to take out land use permits for land used for inservice hydro lines; for advance notification to purchasers of expiry date for completion of building or other conditions of sale to give them an opportunity to avoid cancellation; for the assignment of interests of deceased persons held under sale, lease, licence of occupation and land use permit; for notifying purchasers of public health requirements in Crown subdivisions; for fixed charges for land sold or leased for certain purposes not covered by regulation and for payment of fees for services including the preparation of documents other than Crown patents and leases, and the renewal, alteration and cancellation of leases, licences and sales; for the payment of surcharge equal to provincial land tax on areas covered by land use permits; for the correct method of completing declarations in support of claims to Crown land, particularly in respect of section 19 of the Act; for fixed minimum charges for the sale or lease of land on highways; for the creation of buffer zones one mile in perpendicular width from the boundaries of provincial parks; for procedure preliminary to the disposal of road allowances in unorganized territory; for the withdrawal from disposition of summer resort subdivision control areas under the provisions of section 15(2) of the Act; for increasing the minimum size of islands which may be sold from one-third to one-half an acre; for the control and disposition of summer resort lots on registered plans by field offices; for extension of time to purchasers to meet building conditions on summer resort sales; for the sale of surplus or isolated township lots which are difficult to administer and are of no value to the Department, and for the prohibition of the erection of living quarters over boathouses or other structures on water lots.

There is continuous liaison with other departments of government whose legislation and regulations are in any way related to land administration, and cooperative procedures have been developed including securing approval from the Department of Highways in relation to access to highways; the withdrawal of land or the modification of policy to conform with planning

areas established by the Department of Municipal Affairs; the approval or otherwise of applications to establish tourist resorts received by the Department of Travel and Publicity in connection with the adverse effect such may have on recreational zones established by the Department of Lands and Forests, and negotiations with the Department of Mines in the matter of withdrawal of mineral and/or surface rights from disposition under The Public Lands Act or The Mining Act.

Lands returned to the Crown by reason of cancellation of sales, by forfeiture under The Provincial Land Tax Act and purchase of private lands for the Department by the Department of Public Works exceeded by 8,831 acres the amount of land alienated by patent as shown in the following table:

Area returned by cancellation	19,166 acres
Area returned by forfeiture	9,997 "
Area purchased by Public Works	2,055 "
Area patented	22,387 "

ENGINEERING

Water Resources

The number of dams approved for construction pursuant to The Lakes and Rivers Improvement Act totalled 57. The approval of these dams required the examination of 162 plans.

Plans for 1 fishway were examined and approved for construction. This involved the examination of 7 plans. The fishway is being constructed by the Department of Public Works at the Nicolston Dam, on the Nottawasaga River, near Alliston, Ontario.

Ten licences of occupation for damsites and flooding rights were issued during the year. One application for a licence of occupation has been withdrawn due to the adoption of modern techniques in the transportation of pulpwood by the licensee.

Seven licences of occupation were cancelled; two because new

licences of occupation are to issue for additional flooding and five because the licensee is suspending lumbering operations in the area.

Five further licences of occupation will be cancelled upon receipt of the District Forester's report of completion of the required work on the dams by the licensee and one when the licensee advises that the current log drive has been completed.

Eleven licences of occupation are in various stages of completion; five of which will issue early in the next fiscal year.

Water Power Lease Agreement No. 51 was issued to The Hydro-Electric Power Commission of Ontario for Whitedog Falls G.S. on the Winnipeg River, in the District of Kenora.

Water Power Lease Agreement No. 53 was issued to the Spruce Falls Pulp and Paper Company Limited for the Kapuskasing development in the District of Cochrane; being the renewal lease of W.P.L.A. No. 9.

Water Power Lease Agreement No. 54 was issued to Great Lakes Power Corporation Limited for Hollingsworth (Cat) Falls on the Michipicoten River, in Township 27, Range 23, in the District of Algoma.

Water Power Lease Agreement No. 55 issued to Great Lakes Power Corporation Limited for Lower Falls development on the Montreal River, in Township 29, Range 15, in the District of Algoma.

Water Power Lease Agreement No. 56 issued to Great Lakes Power Corporation Limited for Upper Falls on the Montreal River, in Township 27, Range 15, in the District of Algoma.

Water Power Lease Agreement No. 57 issued to Abitibi Power and Paper Company Limited, for Island Falls development on the Abitibi River, in the Townships of Tolmie and Menapia, in the District of Cochrane.

Water Power Lease Agreement No. 59 issued to The Hydro-Electric Power Commission of Ontario, amending W.P.L.A.'s 42, 43 & 50, for Ear Falls, Manitou Falls and Caribou Falls, respectively, in the matter of costs of operation thereof.

The installed capacity of all plants under Crown lease increased by 53,000 horse-power during the year to a total of 4,380,490 horse-power as of March 31st, 1961.

Twenty field trips were made to inspect the condition of dams, investigate complaints in regard to water levels, make surveys of watersheds and to attend meetings to discuss the operation of dams.

The re-construction of eleven dams was recommended to the Department of Public Works, continuing the programme of re-building abandoned logging dams in the interests of forest protection, conservation and fish and wildlife propagation. Assistance was given to the Public Works engineers in determining a satisfactory regulated water level and obtaining stream flow and historical data useful in designing the new dams.

Eight projects were completed and one partially completed, which will be finished in 1961. Two projects were carried over into the 1961-62 programme. The operation of the completed dams becomes the responsibility of the Department of Lands and Forests.

Buildings

The major 'A' building projects completed during the fiscal year were the Geraldton District Office and a residence for the Kenora District Biologist.

There were numerous ALF projects among which were Marten River Park Bridge, White River Office and Maintenance Buildings, Boathouses at Kingsville and Little Current, Chief Ranger Headquarters Building at Hornepayne, Vehicle Storage Buildings at Hearst and Hornepayne, Ranger Headquarter Buildings at Larder Lake and Englehart. Office, warehouse and vehicle storage at Clarke Lake, radio Station office at Tweed and docks at Pembroke and Trout Lake.

Hatcheries

At Chatsworth, arrangements were made for the supply of various pieces of equipment and the new hatchery building was placed in partial operation. Planning was continued for the renovation of the rearing ponds.

Renovation of the Gibson Creek substation of the Normandale Hatchery was completed except for some minor details and the site placed in service.

A project was expedited for the design and construction of a fish ladder on the Nottawasaga River at the Nicolston Dam near Alliston. The

project is scheduled for completion in April, 1961. This is an experimental structure which will facilitate the migration of Rainbow Trout and studies will be made of the operation.

Preliminary planning was continued for the renovation of the Normandale (Walsh) Hatchery and Trout Rearing Station.

At Hill's Lake, planning was commenced for the replacement of approximately 1,200 feet of old reinforced concrete supply flume which has deteriorated, with a buried 16 inch diameter asbestos-cement water main. This flume is essential to hatchery operation as it carries the entire water supply. This project is to be undertaken during the coming fiscal year.

At the Dorion Hatchery and Trout Rearing Station, 20 new rearing troughs of overlaid plywood were constructed and installed by the hatchery staff. The water supply to this section was renovated by eliminating the old wooden head trough and molasses gates, and installing an asbestos cement supply main on the floor from which the new troughs are supplied via a system of rigid plastic pipe risers, headers and valves.

At the Pembroke Hatchery and Trout Rearing Station, 24 new reinforced-plastic rearing troughs were installed on modern metal supports and placed in service. Field work was undertaken to provide data for possible improvements to the water collection system. A project will be set up to extend the collecting trench in an effort to increase the volume of flow.

LAND USE PLANNING

Wilderness Areas

The following areas have been declared wilderness areas under the Wilderness Areas Act of 1959 for the reasons as shown -

<u>Item No.</u>	<u>Wilderness Area</u>	<u>Description</u>	<u>Purpose of Establishment</u>
1	Massacre Island Wilderness Area	Consists of 70 acres, - located in Lake of the Woods	This island is of historical interest since it was here that Lieut. Jean Baptiste La Verandrye (son of the explorer, Pierre Gauthier De La Verandrye), Father Aulneau (Jesuit Missionary) and 19 other men were slain by marauding Indians in 1736.

			This is also the only site in Ontario where pelicans have been recorded as breeding. It also has a breeding colony of cormorants.
2	Jones Road Wilderness Area	Consists of 640 acres, north of the Township of Jackman, District of Kenora	This area is reserved for silvicultural research. It contains a red pine stand which is over 300 years old. The area is of scientific and scenic value.
3	White Otter Lake Wilderness Area	Consists of 41 acres in the District of Kenora	This area contains a typical forest ranger cabin built of logs and also a possibly unique log castle built by a Scottish trapper for a bride who never appeared.
5	Sioux Mountain Wilderness Area	Consists of 28.4 acres in the Township of Drayton, District of Kenora	This high rocky hill, rising some three hundred feet above the water opposite Sioux Lookout, is said to be the lookout where a watch was kept for marauding bands of Sioux Indians; hence, the name of the town.
6	Echo Township Wilderness Area	Consists of 492 acres in the Township of Echo, District of Kenora	On this area is a stand of red pine which is scarce in Sioux Lookout District. It is set aside for silvicultural research, seed production and educational purposes.
7	Outer Barn Island	Consists of 161 acres in the District of Thunder Bay	This island is an isolated crag which should be set aside for posterity.
8	Bat Cave	Consists of 177 acres in the Township of Dorion, District of Thunder Bay	This area is unique in that very few caves are found in Northern Ontario and this particular one is the overwintering place of a large number of bats. The adjacent area contains two rare plants - the Smooth Cliff Brake (<i>Pellaea glabella</i>) and Dickie's Fragile Fern (<i>Cystopteris dickieana</i>).
9	Sleeping Giant	Consists of 633 acres in the Township of Sibley, District of Thunder Bay	This is a well known point of interest at the head of the lakes; a geological formation which resembles the recumbent form of a human.
10	Porphyry Island	Consists of 260 acres in the District of Thunder Bay	This island contains flora rare in this area.
12	Sutton Lake Gorge	Consists of 125 acres in the District of Kenora (Patricia Portion)	Here, Sutton Lake narrows to a width of approximately ten feet, with both banks of solid rock rising to a height of four hundred feet above the lake

- | | | | |
|----|----------------------|--|---|
| 13 | Cape Henrietta-Maria | Consists of 144,000 acres in the District of Kenora (Patricia Portion.) | level. This rock outcrop is literally "bursting up" through muskeg stretching out in all directions for many miles. It is the only nesting place for the golden eagle in Ontario. |
| 14 | Old Fort Albany | Consists of 11 acres in the District of Cochrane | The flora here contains an Arctic element found nowhere else in Ontario. Arctic mammals, such as the walrus, polar bear, bearded seal and Arctic fox, occur here. Also, there are 11 species of Arctic birds which breed nowhere else in Ontario. |
| 15 | Abitibi Narrows | Consists of 9.75 acres in the Township of Rand, District of Cochrane | The site of one of the early Hudson's Bay Posts and of historical interest. It is said to be one of the oldest places of residence in Ontario. |
| 16 | Fairy Point | Consists of 640 acres in the Township of Missinaibi, District of Sudbury | This is the site of an old Hudson's Bay Company fur trading post and also the site of an old Indian burial ground. |
| 17 | Whitefish Falls | Consists of 266 acres in the Township of Missinaibi, District of Sudbury | This is the site of an old Indian battle ground and contains a large number of Indian paintings or pictographs. |
| 18 | Old Brunswick House | Consists of 51 acres in the Township of Kildare, District of Algoma | This area has aesthetic and recreational value. |
| 19 | Montreal River | Consists of 108 acres (in Township 29 Range XIV) in the District of Algoma | Site of a Hudson's Bay trading post. |
| 20 | Hilton Township | Consists of 97 acres in the Township of Hilton, District of Algoma | On this area is a stand of red pine which is valuable for a seed orchard. It is also the site of Lake Superior beach said to be over 35000 years old. |
| 21 | Crater Lakes | Consists of 550 acres in the Township of Killarney, District of Manitoulin | This area is recommended from an educational standpoint to demonstrate tree farming methods to members of 4H Clubs. |
| 22 | Eighteen Mile Island | Consists of 482 acres in the Township of Mason, District of Sudbury | This is a scenic and historic site. |
| 23 | Ganley Harbour | Consists of 6.5 acres in the District of Thunder Bay on the shore of Lake Superior | This area is of silvicultural interest to observe the undisturbed succession of the existing forest type. |
| | | | This area contains stone pits and cairns said to have been constructed by the Vikings. |

24	Richardson Harbour Island	Consists of 42 acres in the Township of Homer, District of Thunder Bay off the shore of Lake Superior	This area contains stone pits and cairns said to have been made by the Vikings.
25	Kishkebus Lake	Consists of 332 acres in the Township of Barrie, County of Frontenac	This is an area of high aesthetic and recreational value.
27	Matawatchan Wilderness Area	Consists of 160 acres in the Township of Matawatchan, County of Renfrew	This hardwood stand of timber is of interest, from a silvi-cultural standpoint, to observe the natural succession in an undisturbed area.
28	Rondeau Park	Consists of 559.74 acres. Situated in Rondeau Provincial Park, Township of Harwich, County of Kent	This site contains samples of flora and fauna found in few other places in Ontario.
29	Turkey Point	Consists of 52.85 acres in the Township of Charlotteville, County of Norfolk	This site contains flora and fauna distinctive of this area of Ontario.
30	McCrae Lake	Consisting of 625 acres in the Township of Baxter, District of Muskoka	This area has recreational value and is also a site for biological investigations.
74	Presqu'ile Islands	Consists of 322 acres in the County of Northumberland	These islands, within Presqu'ile Provincial Park, are an important nesting area for ring-billed gulls and common terns which occur here in thousands.
78	New Brunswick House Post	Consists of 137 acres in the Township of Cromlech, District of Algoma	This area is the site of a Hudson's Bay Post and, as such, has value as a historical site.
82	Pinery Provincial Park Forest	Consists of 197 acres in the Township of Bosanquet, County of Lambton in Pinery Provincial Park	This area is of value from the viewpoint of outdoor recreation, botany and physiography and was selected for this scientific interest.
83	Pinery Provincial Park Shore	Consists of 75 acres in the Township of Bosanquet, County of Lambton in Pinery Provincial Park	This area was selected as an example of undisturbed shoreline. It will be reserved as an example of the fore dune, rear dune area, "blow-out," and all the associated natural vegetation. It possesses a peculiar, wild solitude. The geomorphology of shore-dunes is extremely well shown by these natural features, which are unique in Ontario public lands.
84	Pinery Provincial Park Dune-Forest	Consists of 129.5 acres in the Township of Bosanquet, County of Lambton in Pinery	This area of rough terrain, with a light cover of oak and pine, possesses a wilderness aspect and a magnificent view at a

Provincial Park

- | | | | |
|----|--|--|--|
| 85 | Pinery
Provincial
Park Flood-
Plain | Consists of 25 acres
in the Township of
Bosanquet, County of
Lambton in Pinery
Provincial Park | point overlooking the Ausable
River and marsh borders. The
vegetation had been repeatedly
burned until the Park was
acquired in 1955. In evidence
are many "blow-outs," which tend
to complicate the topography of
parallel dunes. Many "blow-outs"
have become "fixed" with
vegetation, which is a living
example of the natural forest
succession under these conditions.
This area has a potential for
good nature trails. |
| 86 | Agate
Island | Consists of 148 acres
in the District of
Thunder Bay | This area is of value from the
viewpoint of outdoor recreation,
botany and physiography and was
selected for this scientific
interest. |
| 89 | Tickell
Wilderness
Area | Gull Island in the Bay
of Quinte | This island is reserved to permit
its retention in public owner-
ship as a recreational area,
particularly as a source of
agates, which are sought by
amateur collectors.

To preserve this island in its
natural state and to provide a
landing for watercraft. |

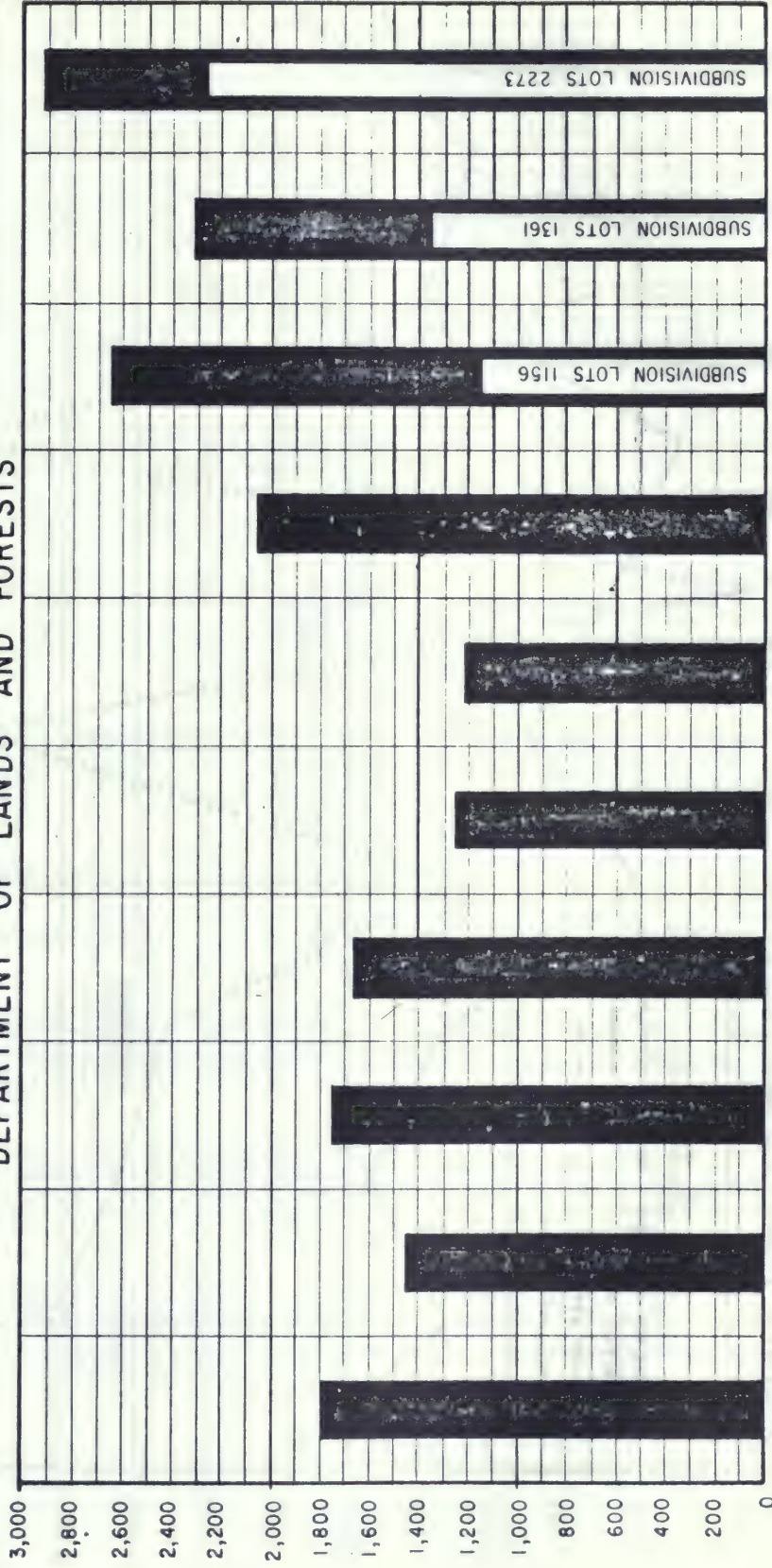
TREND OF RETRACEMENT SURVEYS

PREPARED FROM MILEAGE FOR THE PAST TEN YEARS
1951-52 TO 1960-61



SURVEYED SUMMER RESORT LOCATIONS ON CROWN LAND

EXAMINED BY THE LANDS & SURVEYS BRANCH, SURVEYS SECTION
DEPARTMENT OF LANDS AND FORESTS

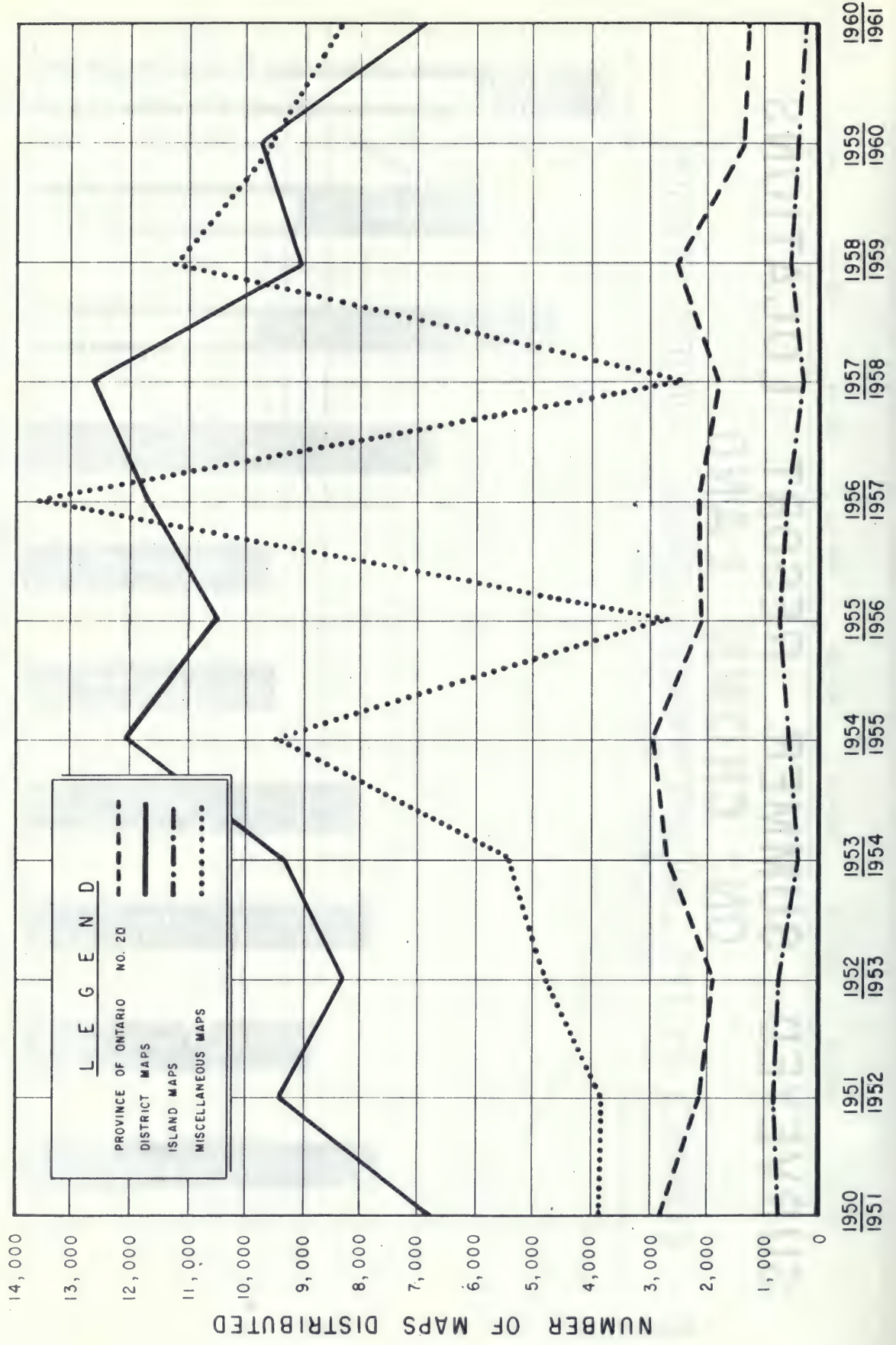


1951-52 1952-53 1953-54 1954-55 1955-56 1956-57 1957-58 1958-59 1959-60 1960-61
FISCAL YEAR ENDING MARCH 31st

INDIVIDUAL SURVEYED SUMMER RESORT LOCATIONS

TREND OF MAP DISTRIBUTION

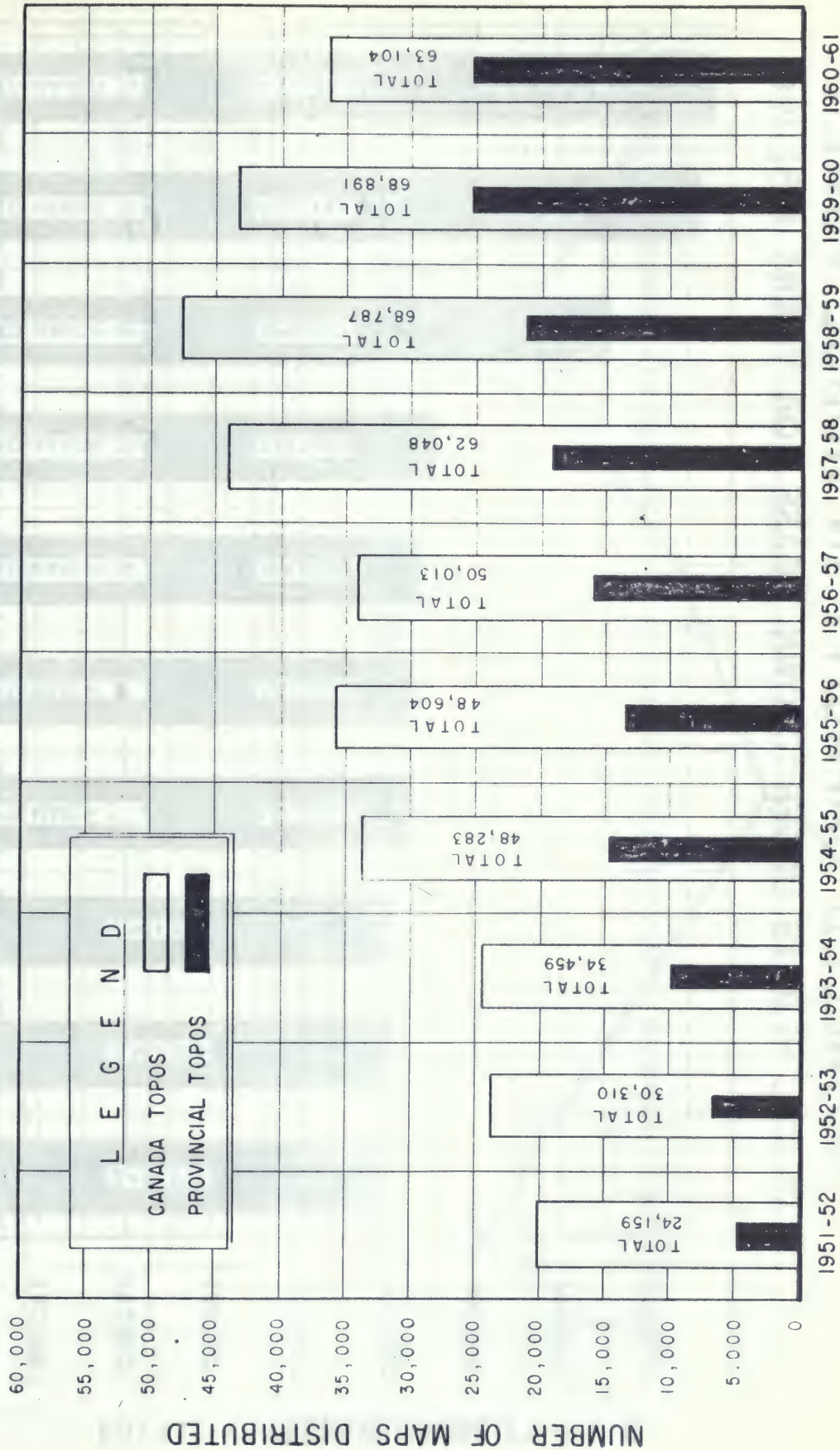
PROVINCIAL ISSUES
DEPARTMENT OF LANDS AND FORESTS



FISCAL YEAR

TREND OF MAP DISTRIBUTION

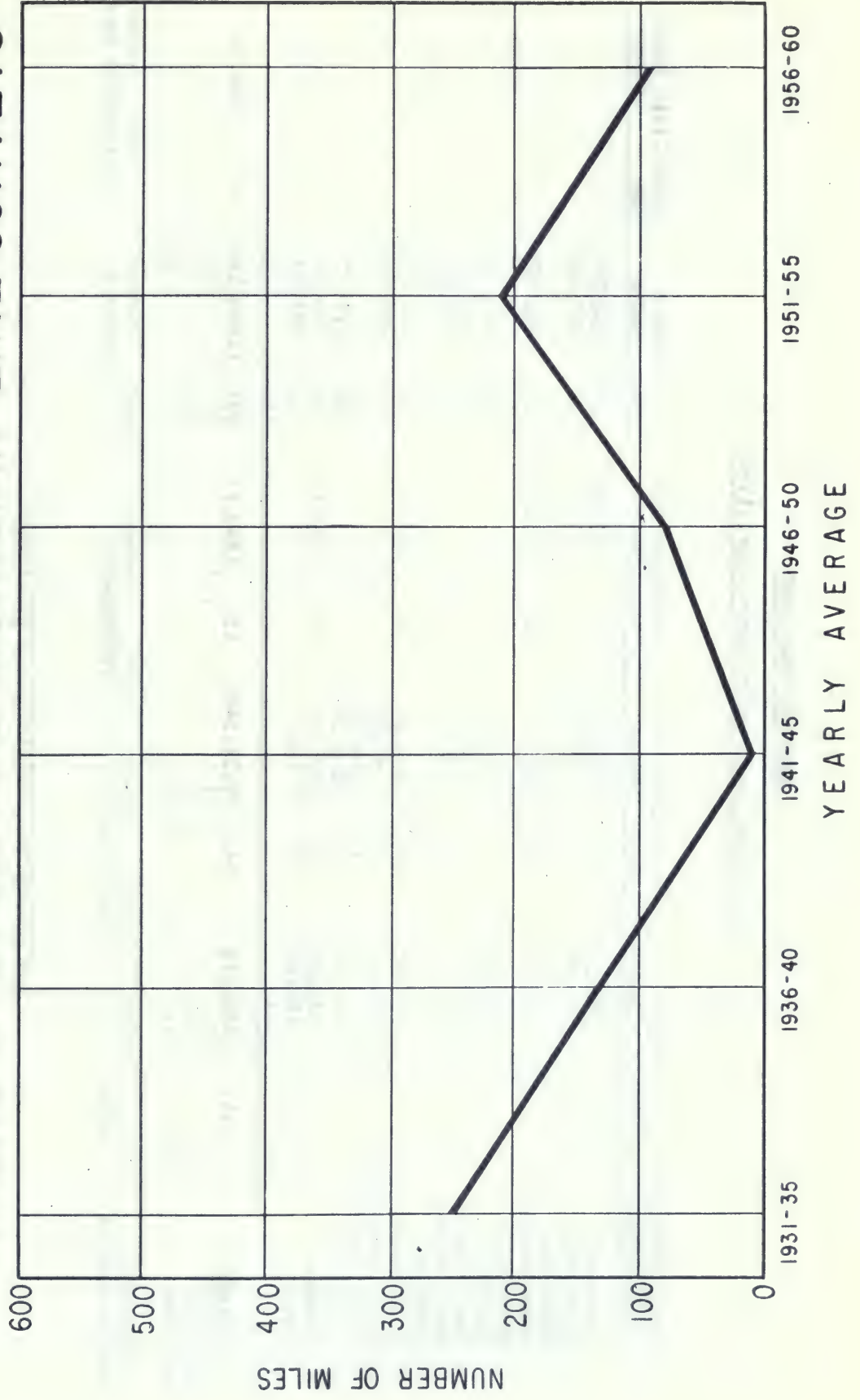
NATIONAL TOPOGRAPHIC SERIES
DEPARTMENT OF LANDS AND FORESTS



OF ALL PLANTS UNDER CROWN LEASE FOR YEARS 1952-1961



TREND OF BASE AND MERIDIAN LINE SURVEYS



AGRICULTURAL LAND

The fiscal year ending March 31st, 1961.

Administrative District	Sales		Cancellations		Assignments		Patents		Quit Claim Deeds	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Cochrane	3	218.25	13	1016.65	3	212.00	25	2458.368		
Fort Frances	2	253.00	1	153.246	1	161.5	4	407.418		
Geraldton			1	51.10						
Kapuskasing	4	227.55	18	1587.5	2	199.00	13	996.232		
Kemptville									1	34.00
Kenora	9	1125.66	1	165.00			20	2466.759		
North Bay	2	160.00	2	146.1			5	618.65		
Parry Sound			2	101.00			1	100.00		
Pembroke									1	45.5
Port Arthur	2	327.00	18	2451.00	3	405.5	11	1221.609		
Sault Ste Marie	1	162.00	1	40.00			3	483.00		
Sioux Lookout			1	124.2						
Sudbury	8	999.64	2	240.00			10	1376.90		
Swastika	3	234.00	29	2334.25	6	552.75	8	738.25		
Tweed	1	101.00	5	722.5			2	201.00	4	485.00
Totals	35	3808.10	94	9132.546	15	1530.75	102	11068.186	6	564.50

SUMMER RESORT

The fiscal year ending March 31st, 1961.

Administrative District	Sales		Cancellations		Assignments		Patents		Quit Claim Deeds	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Chapleau	1	3.49	1	1.16			6	6.54		
Cochrane	25	16.164	1	0.52			22	18.18		
Fort Frances	39	46.45	1	1.37	1	1.13	45	63.18		
Geraldton	6	4.23	5	4.42			9	9.26		
Gogama	4	4.36					3	5.10		
Kapuskasing	20	24.297					25	19.795		
Kenora	138	163.821	3	4.30	2	2.28	82	100.326		
Lake Erie	144	34.12					156	36.56		
Lake Simcoe	27	21.738	2	1.223	1	1.00	46	46.938		
Lindsay	147	126.32	10	13.10	8	8.15	336	351.537		
North Bay	80	84.553	6	11.46	2	1.51	136	146.027	1	4.0
Parry Sound	386	392.967	16	17.038	3	3.12	455	482.0685		
Pembroke	31	35.82	1	3.259			34	42.30		
Port Arthur	63	66.321			2	1.64	52	57.686		
Sault Ste Marie	45	63.09	3	5.22	1	1.05	58	82.99		
Sioux Lookout	10	17.214	3	3.16			17	35.124		
Sudbury	197	232.888	3	3.196	4	3.002	208	248.591		
Swastika	16	21.238					17	22.212		
Tweed	150	157.728	3	2.68	1	2.48	123	145.298		
White River	28	26.48					10	9.26		
Totals	1557	1543.289	58	72.106	25	25.362	1840	1928.9725	1	4.0

LAND FOR SPECIAL USE

The fiscal year ending March 31st, 1961

Administrative District	Sales		Cancellations		Patents		Quit Claim Deeds	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Cochrane	6	167.359			8	257.596		
Fort Frances	1	0.964	1	0.69	2	1.654		
Geraldton	4	6.37	2	59.20	2	3.24		
Gogama	1	0.11						
Kapuskasing	6	4.543			7	61.824		
Kemptville					1	0.032		
Kenora	14	31.92	1	0.95	17	20.00		
Lake Erie	3	6.711			7	332.907		
Lake Huron					2	100.861		
Lake Simcoe	5	47.30			10	50.714		
Lindsay	2	2.136			2	3.636		
North Bay	6	58.096	1	0.47	18	93.427		
Parry Sound	3	99.97	1	98.00	8	363.138		
Pembroke	9	361.11			13	374.540		
Port Arthur	1	162.00			5	905.15		
Sault Ste Marie	6	18.807			7	217.957		
Sioux Lookout	3	4.38			3	2.64		
Sudbury	14	391.310			20	635.057		
Swastika	2	5514.587			4	165.119		
Tweed	20	1535.088			19	1141.797	3	50.00
White River	2	736.838			1	157.668		
Totals	108	9149.599	6	159.31	156	4888.957	3	50.00

CITIES, TOWNS and TOWNPLOTS

The fiscal year ending March 31st, 1961.

Administrative District	Sales		Cancellations		Assignments		Patents		Quit Claim Deeds	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Chapleau	7	1.848			1	0.52	1	0.52	1	0.34
Cochrane	13	3.842			9	2.016	9	2.016	2	155.55
Geraldton	5	1.16			1	0.24	17	5.567		
Gogama	26	5.789	7	1.40	1	0.25	6	1.15		
Kapuskasing	5	7.22					27	6.862		
Kenora							4	2.88		
Lake Erie										
Lake Huron										
Lake Simcoe	1	0.27					1	2.00		
North Bay	2	1.00								
Parry Sound	1	1.6					1	0.18		
Pembroke	6	2.98					2	0.454		
Sioux Lookout	3	1.27	1	0.20	1	0.16	2	0.62		
Sudbury	7	1.162	4	0.77	2	0.33	6	0.80		
Swastika	7	1.302	1	0.018			10	2.019		
White River			4	0.93			5	0.55		
Totals	83	29.443	17	3.318	5	0.98	91	25.618	3	155.89

FREE GRANT LAND

The fiscal year ending March 31st, 1961.

Administrative District	Cancellations		Assignments		Patents	
	No.	Acres	No.	Acres	No.	Acres
Kapuskasing	2	175.00			9	1302.887
Kenora					1	95.4
North Bay	3	300.00			4	314.00
Parry Sound	54	5666.75			2	286.5
Port Arthur	8	1210.5			1	145.00
Sault Ste Marie	4	357.00			2	290.031
Sudbury	2	157.50				
Swastika	1	80.00			3	325.31
Tweed	1	100.00				
Totals	75	8046.75			22	2759.128

RETURNED SOLDIERS AND SAILORS

Cochrane	1	75.5	2	156.25	2	234.00
Fort Frances					1	160.00
Kapuskasing	1	100.00			2	228.00
Kenora						
Parry Sound	2	300.00				
Port Arthur	3	496.00				
Sioux Lookout	1	144.5			2	320.00
Swastika	6	636.00				
Totals	14	1752.00	2	156.25	7	942.00

Statement of patents, etc. issued during the year ending March 31st, 1961

Public Land Patents	1949	
Free Grant Patents	22	
Free Grant Patents Soldiers & Sailors	7	
Patents & Transfers (Town Lots)	94	
Miscellaneous Documents	159	
Release of Pine	<u>14</u>	2245
Crown Leases	29	
Algonquin Park Leases	4	
Rondeau Park Leases	4	
Water Power Lease Agreements	<u>7</u>	44
Licenses of Occupation	<u>68</u>	68
Licenses of Occupation Cancelled	64	
Crown Leases Cancelled	<u>20</u>	84

LAND USE PERMITS ISSUED FROM APRIL 1st, 1960, to MARCH 31st, 1961.

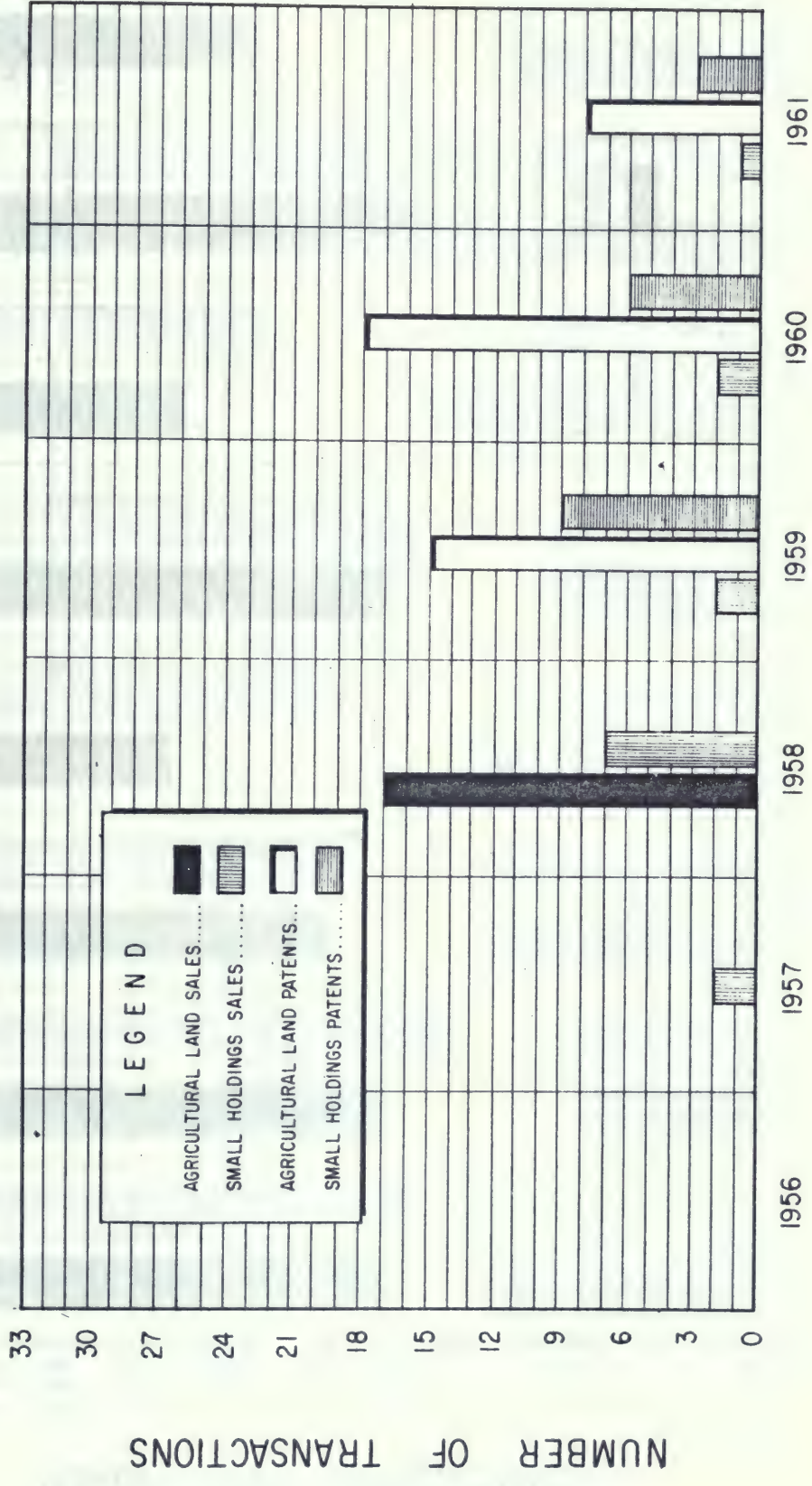
Administrative	Hunt Camp	Trapper's Camp	Residence	Agricultural	Marsh Hay	Mill Site	Sugar Bush	Boat Houses	Miscellaneous	Departmental Houses
	No. Acres	No. Acres	No. Acres	No. Acres	No. Acres	No. Acres	No. Acres	No. Acres	No. Acres	No.
Algonquin Park	216 216.00	15	14.50	17	254.25	25	6.25	86	1489.67	105
Chapleau	22 22.00	33	33.00	23	22.00	1	5.00	15	272.00	21
Cochrane	84 84.00	3	3.00	33	31.50	4	202.50	10	515.00	5
Fort Frances	4 4.00	29	28.00	4	2.50	5	30.00	7	1.75	34
Geraldton	19 19.00	12	12.00	63	68.05	3	43.00	11	170.00	6
Gogama	40 40.00	8	7.50	16	21.34	4	153.00	7	121.17	3
Kapuskasing	5 5.00	8	8.00	11	10.70	5	61.00	8	87.00	1
Kenora	33 36.00	24	24.10	3	3.25	1	20.00	16	57.50	2
Lake Erie										
Lake Huron										
Lake Simcoe	2 2.00		1	1.00	1	100.00				
Lindsay	150 150.00	8	8.00							
North Bay	147 147.00	8	7.50	17	33.00	3	15.00	16	94.85	2
Parry Sound	402 402.00	4	4.00	34	30.25	2	188.43	1	20.00	5
Port Arthur	19 20.00	3	3.00	4	16.00					
Rideau										
Sault Ste. Marie	48 48.00	18	18.00	3	10.00	1	3.00	3	17.00	
Sioux Lookout	47 49.50	36	36.00	29	33.33	3	6.00	15	76.70	
Sudbury	223 223.00	11	11.00	36	46.25	10	298.00	11	235.00	3
Swastika	9 9.00	2	2.00	4	3.00	7	182.00	1	50.00	19
Tweed	390 390.00		5	9.00	2	32.90	1	50.00	5	42.00
White River	15 15.00	2	3.00	19	15.25	2	8.00	2	21.00	2
TOTALS	1875 1881.50	201	200.10	328	378.92	48	1297.83	22	742.00	188
								7	1657.47	255
									290.00	66.20
									548	23385.38

(not including Departmental Houses)

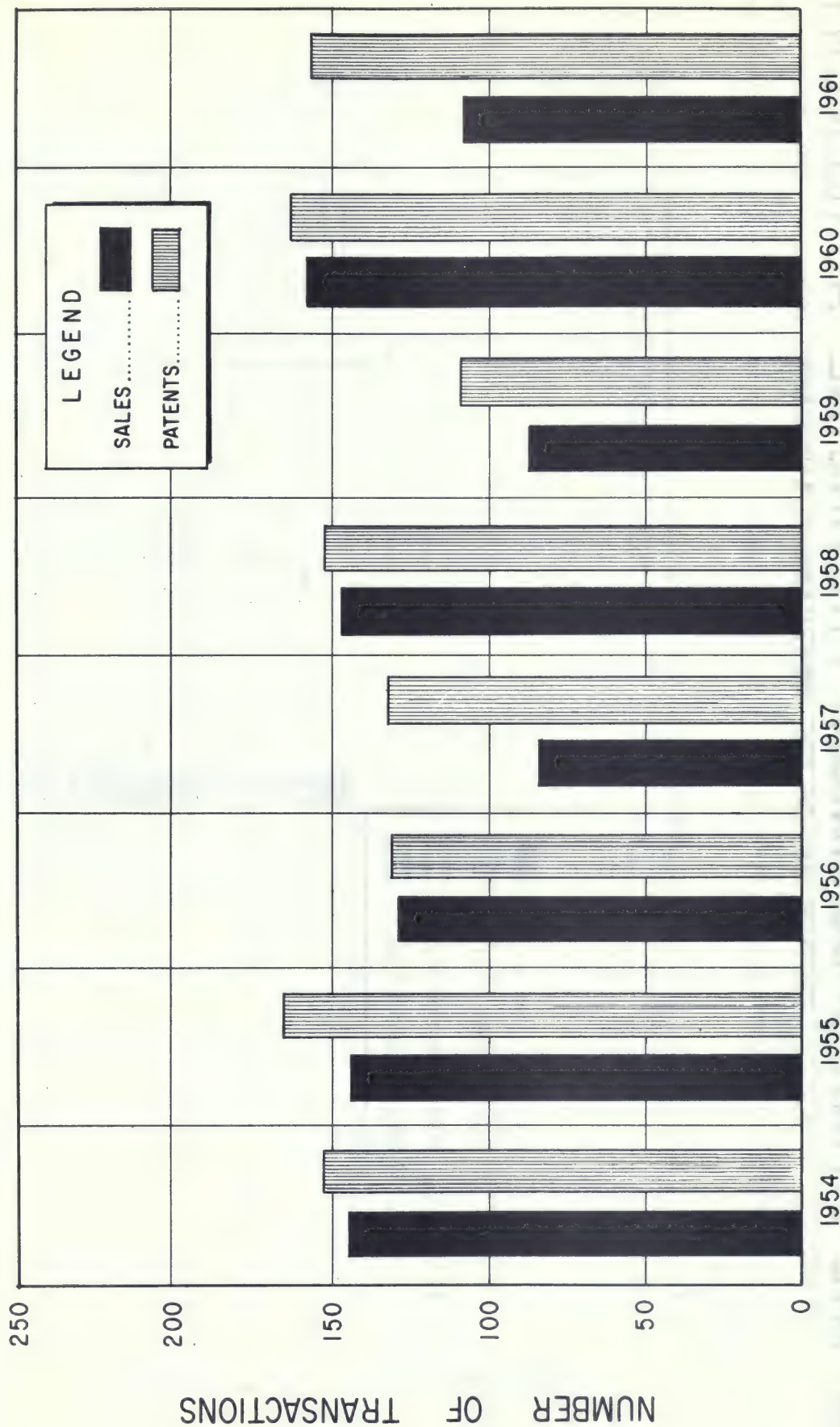
TOTAL NUMBER OF PERMITS 3472
TOTAL NUMBER OF ACRES 29,699.40

THE ONTARIO DOMINION - PROVINCIAL AGREEMENT

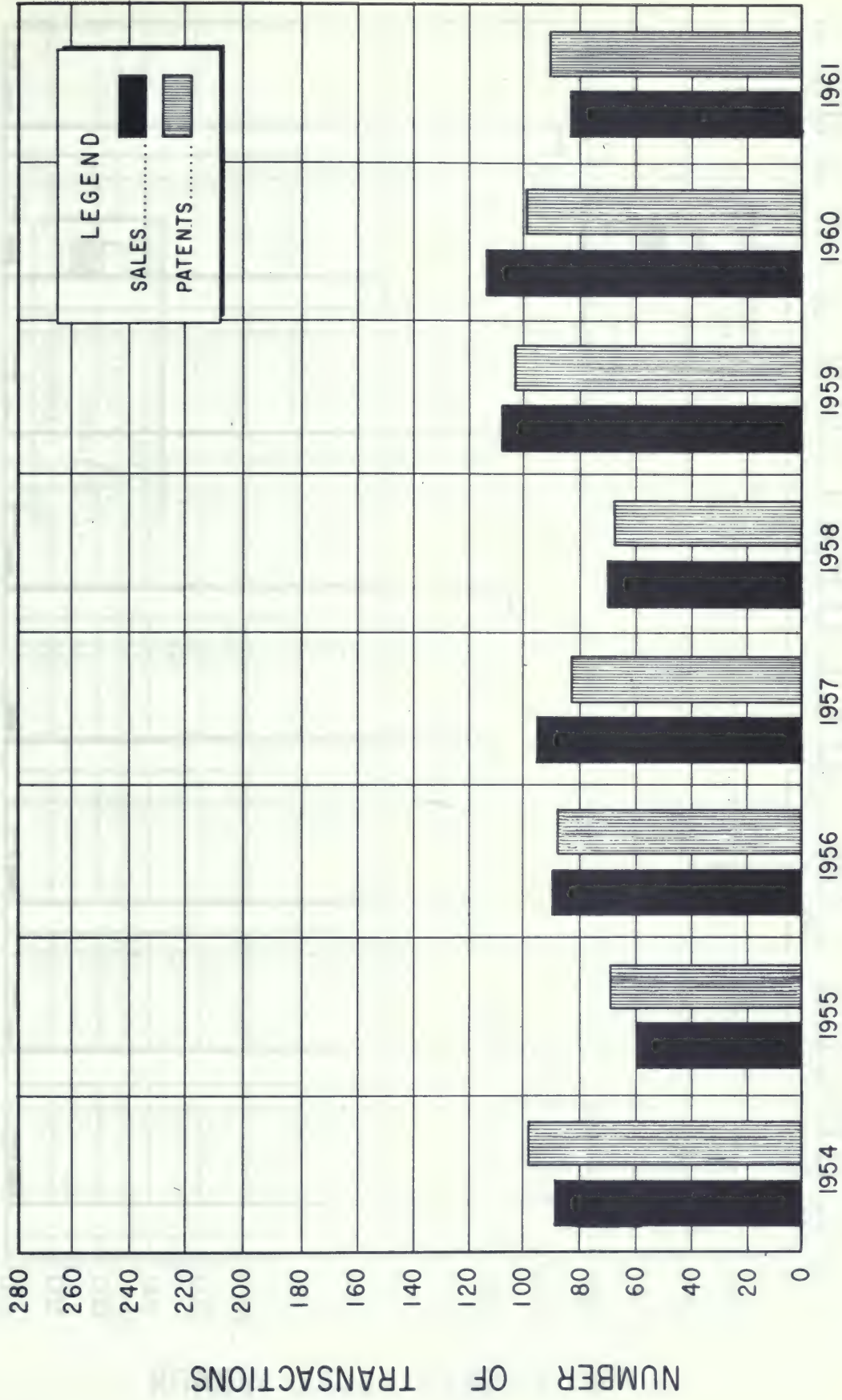
SECTION 38 OF THE VETERANS LAND ACT



LANDS FOR SPECIAL USE

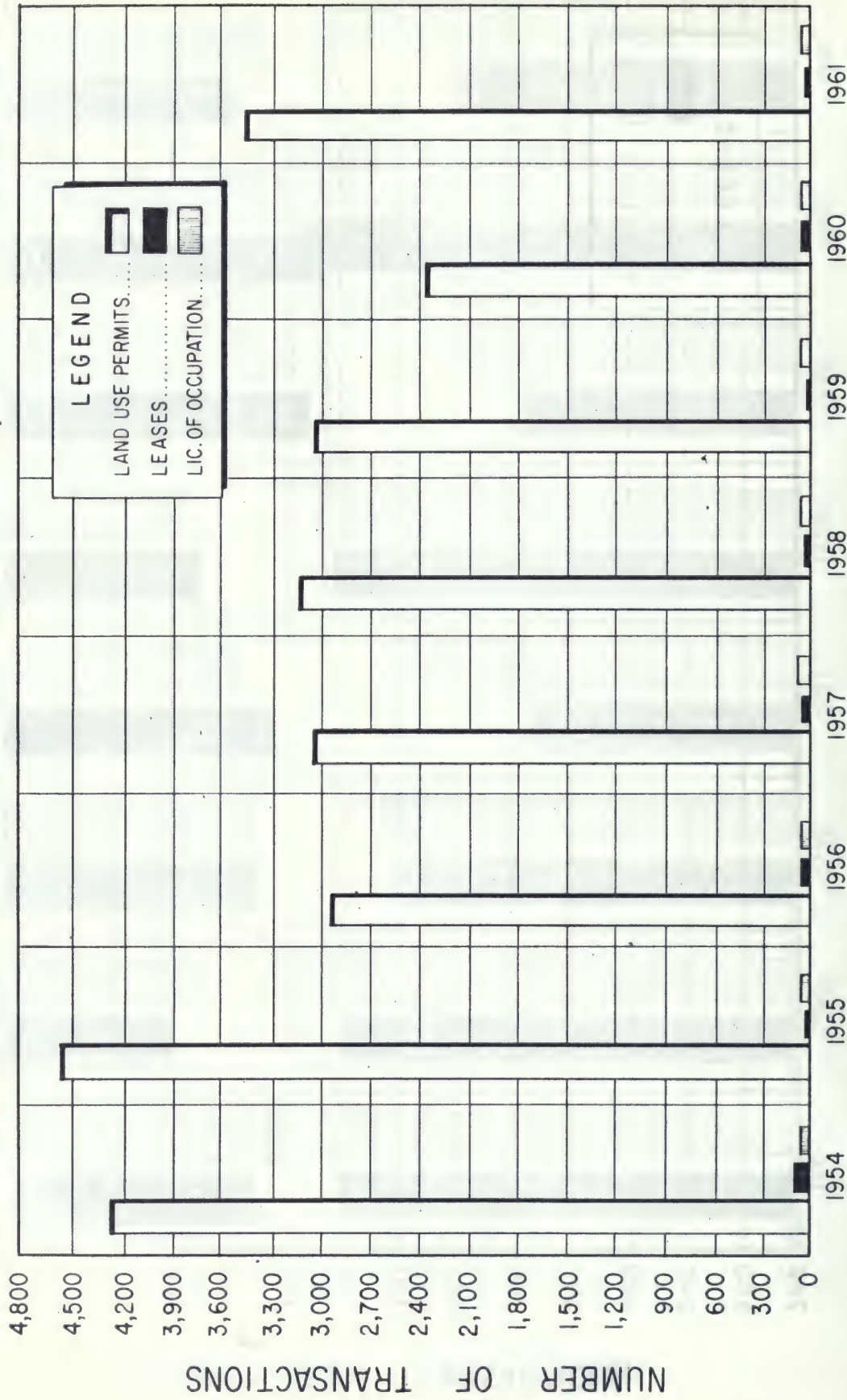


CITY, TOWN AND TOWNSITE LANDS

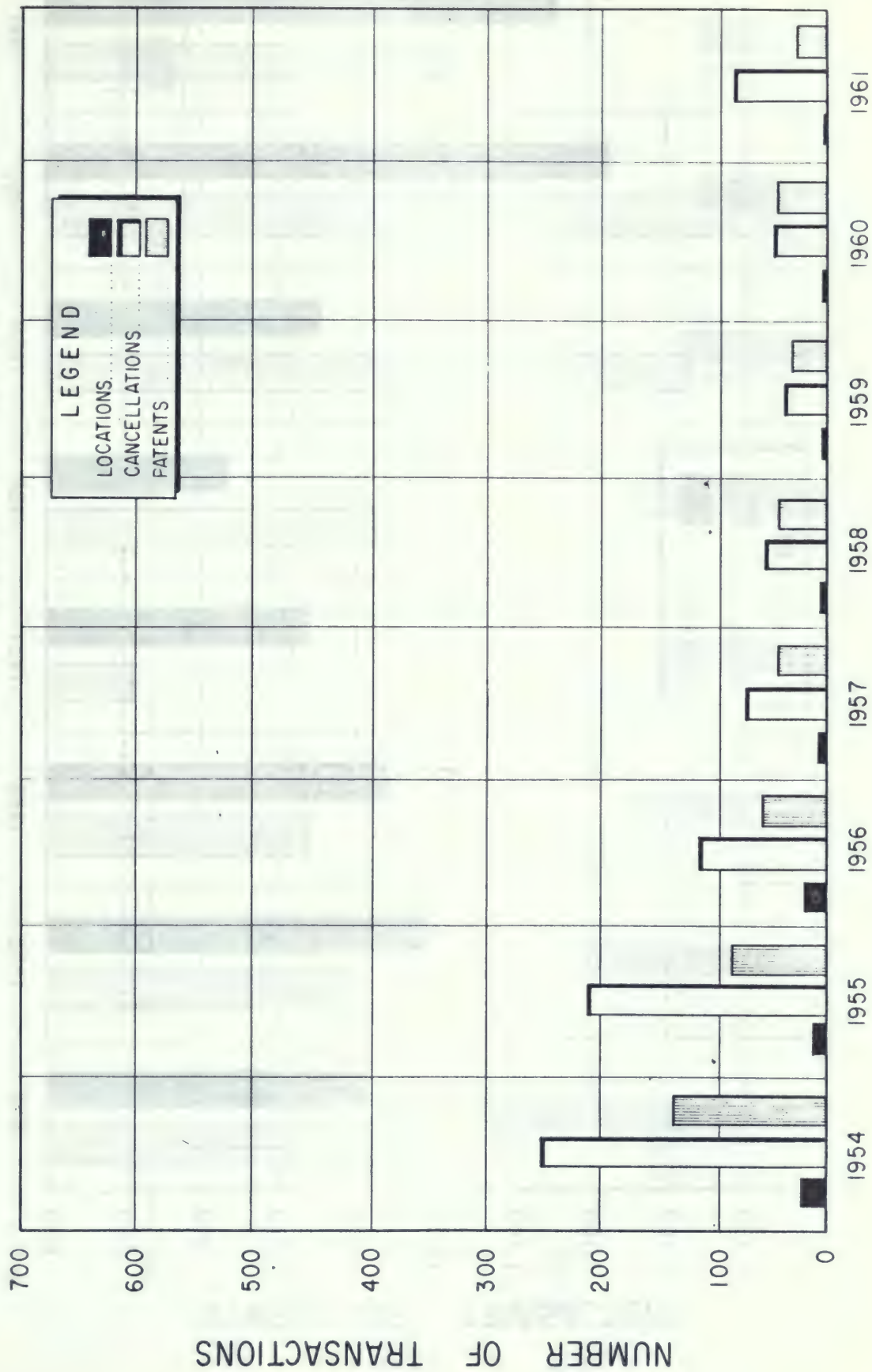


FISCAL YEAR ENDING MARCH 31st.

LAND USE PERMITS, LEASES AND LICENCES OF OCCUPATION ISSUED

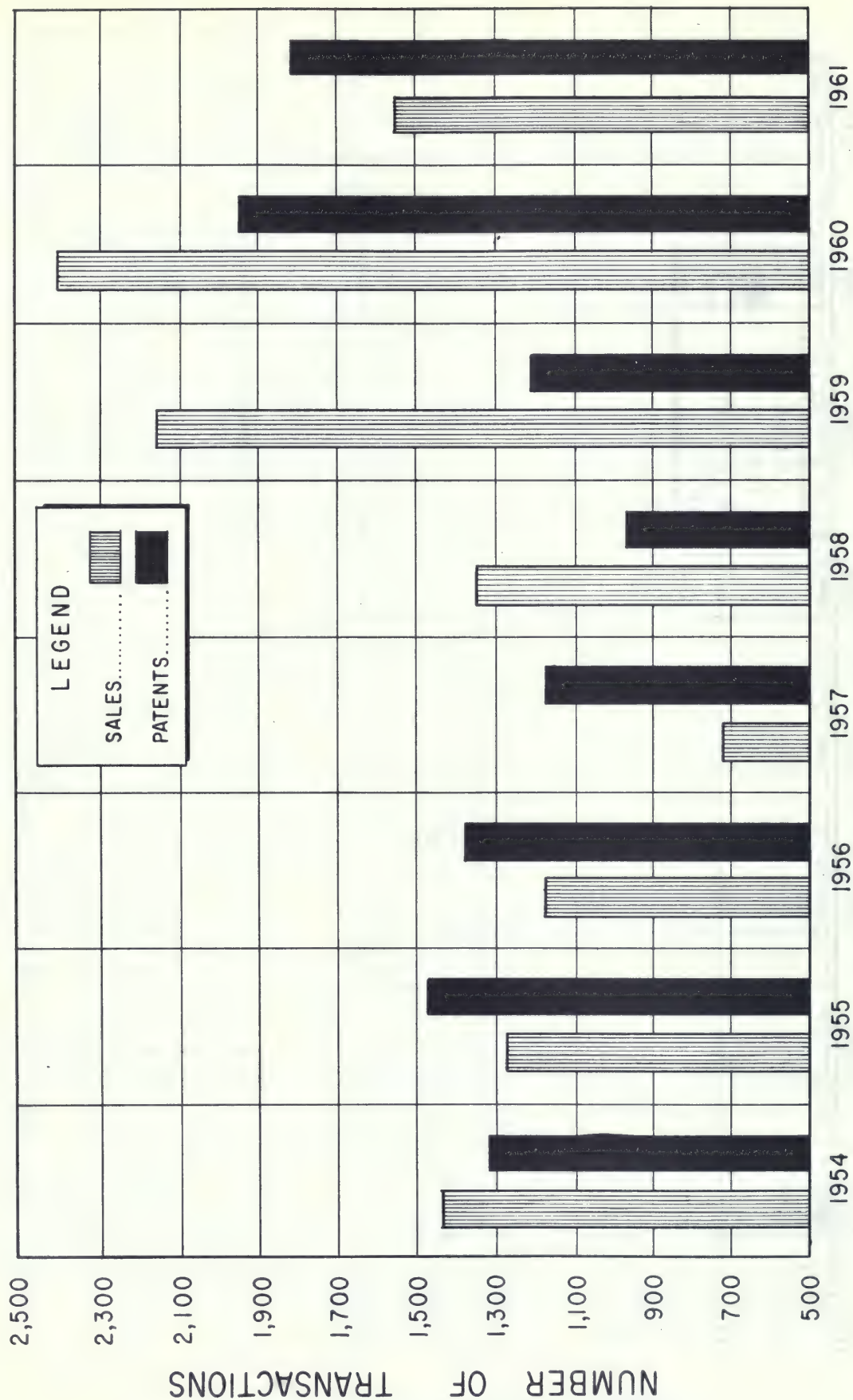


AGRICULTURAL LANDS IN FREE GRANT TOWNSHIPS INCLUDING SOLDIERS' LAND



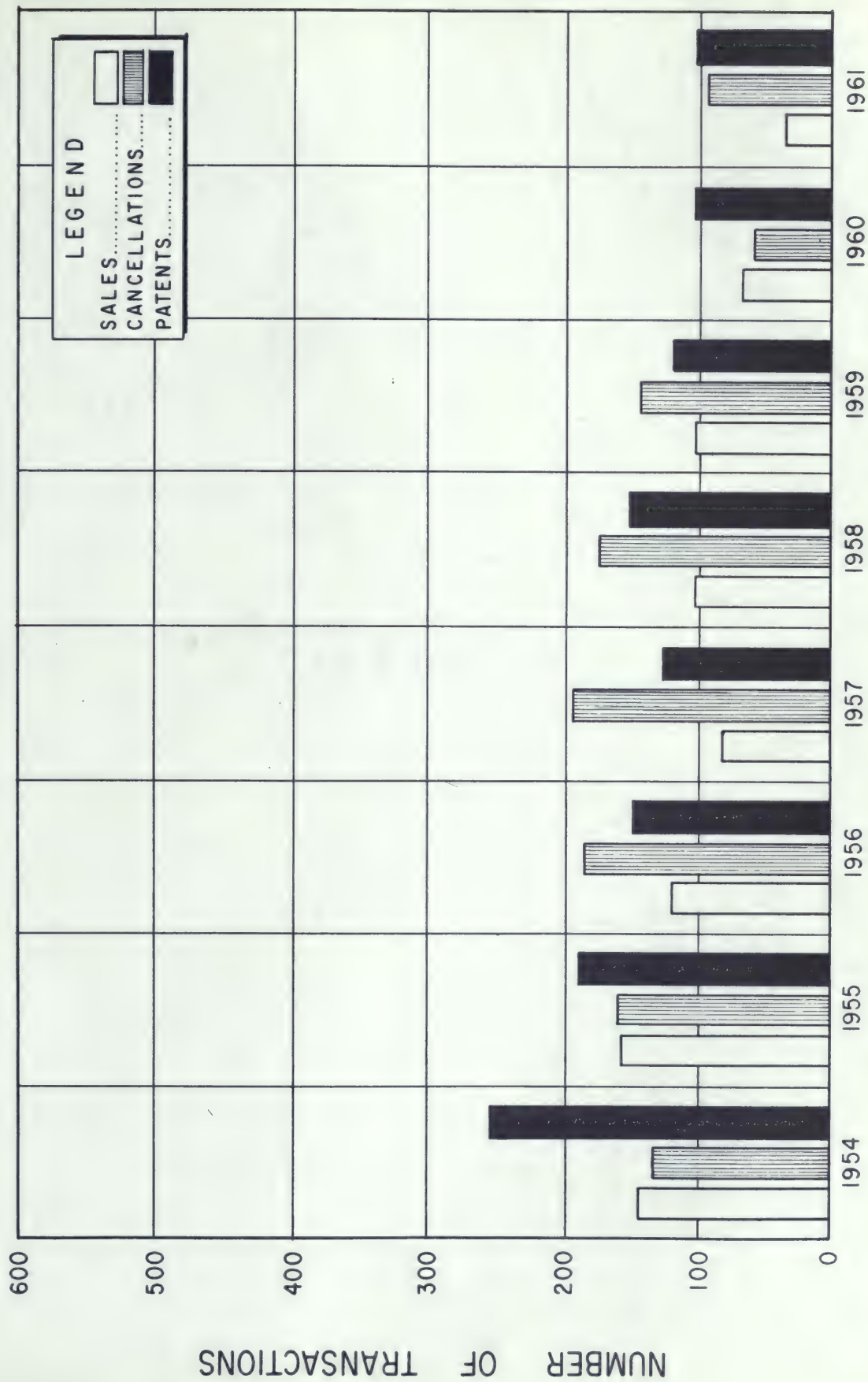
FISCAL YEAR ENDING MARCH 31 st.

SUMMER RESORT LANDS



FISCAL YEAR ENDING MARCH 31st.

AGRICULTURAL LANDS IN SALE TOWNSHIPS



- FISCAL YEAR ENDING MARCH 31st.

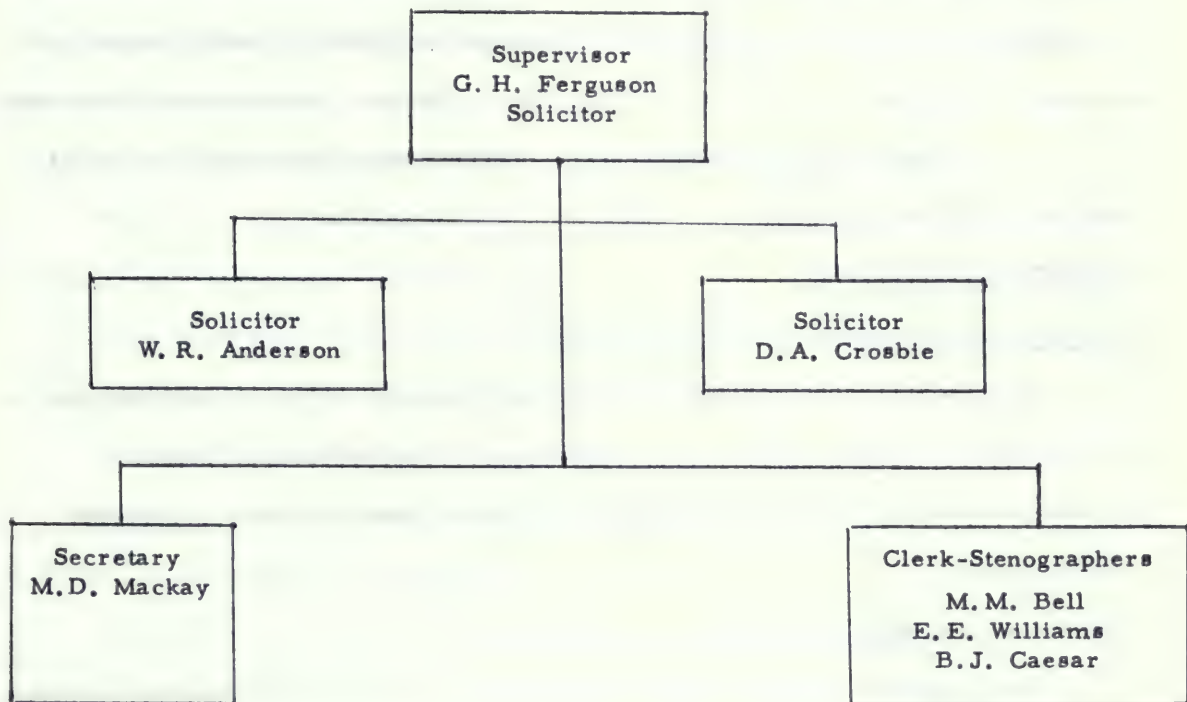
LAW BRANCH



The Department's legal staff prepares material for new and revised legislation applicable to the Department.

LAW BRANCH

ORGANIZATION CHART



RESPONSIBILITIES OF THE LAW BRANCH

Counselling:-

Advising upon the legal position of the Department in all matters affecting the Department. Interpretation of Statutes and regulations.

Preparation of:-

Legislation, regulations, recommendations to Council, agreements, leases, licences, pleadings, office consolidations of statutes and regulations administered by the Department and briefs and memoranda on special subjects.

Other Legal Services:-

Including settlement of claims and disputes, collection of bad accounts, conducting litigation, title searching and conveyancing, examination and checking of patents, leases and licences of occupation.

LEGISLATION

At the Session of the Legislature which convened on the 22nd day of November, 1960 and prorogued on the 29th day of March, 1961, The Algonquin Provincial Park Act, 1960-61 and The Pittsburgh Township Boundary Act, 1960-61, were enacted and amendments were made to The Forest Fires Prevention Act, The Game and Fisheries Act, The Lakes and Rivers Improvement Act, The Provincial Parks Act, The Public Lands Act, The Railway Fire Charge Act, and The Surveys Act.

NOTES ON LEGISLATION

The Algonquin Provincial Park Act, 1960-61

This new Act added the public lands in the townships of Bruton and Clyde in the Provisional County of Haliburton, to Algonquin Provincial Park. The Act provides that section 11 of The Game and Fisheries Act does not apply to the lands added to the park.

The Pittsburgh Township Boundary Act, 1960-61

This Act fixed the location of the north boundary of Lot D, East of the Cataraqui River in the Township of Pittsburgh, formerly in the Township of Kingston in the County of Frontenac in accordance with the survey of Publius V. Elmore, D.P.S., made in 1831. The Act also provides that the original road allowance adjoining the front of the Fourth Concession of the Township of Kingston does not and never did extend easterly of the Cataraqui River and that the northern boundary of the lands granted to Mary Crawford by Letters Patent dated the 24th day of May, 1798, is the north boundary of the lot as fixed by the Act.

The Forest Fires Prevention Amendment Act, 1960-61

Subsection 1 of section 25 of this Act was amended to create an offence for disobedience or refusal or neglect to carry out any condition of a permit issued under the Act.

The Game and Fisheries Amendment Act, 1960-61

By new section 3a to this Act provisions were made for the acquisition of land under The Public Works Act and of real and personal property by the Minister for conservation, management and propagation of the fish and wildlife resources.

Section 14 was amended to clarify the intention of the Act in prohibiting the dealing in caribou, deer or moose.

Section 29 was amended to make a bear a game animal.

Section 31 was amended to adapt, for the party-hunting of moose, the principles now applicable to the party-hunting of deer.

Subsection 8 of section 33 was amended to extend the prohibition against taking certain game by snares or traps to include bear and caribou.

Section 41 was amended to correct a printer's error.

Section 51 was amended to substitute the Minister for the Lieutenant Governor in Council as the authority to establish fish sanctuaries.

Subsection 1 of section 53 was amended to provide authority to sell, under a licence, speckled trout, brown trout and rainbow trout for human consumption.

Subsection 2 of section 56 dealing with the approval of the Minister to certain leases or conveyances, was repealed.

Subsection 5 of section 66 was amended to provide that a person may be apprehended and brought before any justice of the peace and not the "nearest" justice as formerly provided.

By new section 66a the offence of careless hunting was created.

Section 82 was amended to authorize the Lieutenant Governor in Council to make regulations providing open seasons for bear and governing the sale and traffic in game fish.

The Lakes and Rivers Improvement Amendment Act, 1960-61

New section 7a was added to this Act to clarify the legal responsibility of persons giving approvals and making recommendations for approvals under the Act.

The Provincial Parks Amendment Act, 1960-61

By new section 3a of this Act the Lieutenant Governor in Council is authorized to designate any provincial park or any part thereof as being an area in which hunting is permitted from and including the Tuesday following the second Monday in October to and including the 31st day of March next following.

New section 10a makes provision for disposal of lost, mislaid or abandoned property in a provincial park.

Subsection 2 was added to section 11 to prohibit travel on a road or trail that has been closed to travel.

The Public Lands Amendment Act, 1960-61

Subsection 1 of section 17 of this Act was amended to provide that the sale of public lands for agricultural purposes will no longer be dealt with under the regulations but will come under the new section 43b of the Act. By new subsection 3a of section 17 the subsequent sale of land offered for sale by tender or auction and not disposed of is authorized.

New section 27a was enacted to prevent the unauthorized filling in of water lots and the littering of public lands.

New section 27b authorizes the erection of signs on public lands and creates an offence for unauthorized occupation and parking on public lands on which signs have been erected.

New section 43a authorizes the Minister and a municipality to enter into agreements respecting the control and management by the municipality of Crown beaches and water lots.

New section 43b provides for a committee to study areas of public lands suitable for agricultural purposes, recommend measures for development of such areas, review applications and recommend sales, etc., to the Minister.

New section 43c provides for the acquisition of land under The Public Works Act for the programmes of the Department.

Sections 44 to 61 were repealed except in respect of sales or free grants made before the 29th day of March, 1961.

The Railway Fire Charge Amendment Act, 1960-61

Clause d of section 1 of the Act was amended to remove a licensee under The Crown Timber Act from the definition of a tenant.

The Surveys Amendment Act, 1960-61

Subsections 1 and 2 of section 55 of this Act were repealed and new section 58a was enacted to make the provisions relating to the evidence to be shown on plans of subdivision applicable to all plans of survey.

Effective Dates:

The Algonquin Provincial Park Act, 1960-61 and The Provincial Parks Amendment Act, 1960-61, came into force on the 27th day of January, 1961. The Surveys Amendment Act, 1960-61 came into force on the 1st day of June, 1961 and the remainder of the Acts came into force on the 29th day of March, 1961.

REGULATIONS

33 regulations made under the authority of the Statutes administered by the Department of Lands and Forests were approved and filed during the fiscal year from April 1, 1960 to March 31, 1961.

The following are the regulations which were approved and filed:

The Forest Fires Prevention Act

O.Reg. 127/60 - Amending O.Reg. 96/53	- Fire Districts
O.Reg. 179/60 - Amending O.Reg. 96/53	- Fire Districts

The Game and Fisheries Act

O.Reg. 86/60 - Amending O.Reg. 220/59	- Open Season for Fur-bearing Animals - Beaver
O.Reg. 98/60 - Amending O.Reg. 220/59	- Open Season for Fur-bearing Animals - Muskrat
O.Reg. 128/60 - Amending O.Reg. 104/56	- Hunting Licences
O.Reg. 134/60 - Amending O.Reg. 34/56	- Waters Set Apart for specified periods
O.Reg. 137/60 - Amending O.Reg. 31/59	- Open Season for Grouse and Partridge
O.Reg. 138/60 - New and revoking O.Reg. 194/59 and 223/59	- Open Season for Pheasant
O.Reg. 139/60 - Amending O.Reg. 37/59	- Open Season for Deer and Moose
O.Reg. 167/60 - Amending O.Reg. 19/57	- Waters Set Apart
O.Reg. 177/60 - Amending O.Reg. 138/60	- Open Season for Pheasant

O.Reg. 178/60 - Amending O.Reg. 31/59
 O.Reg. 186/60 - Amending O.Reg. 104/56
 O.Reg. 239/60 - Amending O.Reg. 37/59
 O.Reg. 240/60 - Amending O.Reg. 138/60
 O.Reg. 243/60 - New and
 revoking O.Reg. 220/59;
 289/59; 86/60 and 98/60
 O.Reg. 262/60 - Amending C.R.O. 129
 O.Reg. 263/60 - Amending O.Reg. 212/57
 O.Reg. 264/60 - New
 O.Reg. 288/60 - Amending O.Reg. 37/59
 O.Reg. 297/60 - Amending O.Reg. 37/59
 O.Reg. 303/60 - Amending O.Reg. 34/56
 O.Reg. 313/60 - Amending C.R.O. 129
 O.Reg. 20/61 - New
 O.Reg. 21/61 - Amending O.Reg. 212/57
 O.Reg. 62/61 - Amending O.Reg. 34/56

- Open Season for Grouse and Partridge
 - Hunting Licences
 - Open Season for Deer and Moose
 - Open Season for Pheasant

 - Open Season for Fur-bearing Animals
 - Trappers, Fur-Dealers and Tanners
 - Crown Game Preserves
 - Hunting in Provincial Parks
 - Open Season for Deer and Moose
 - Open Season for Deer and Moose
 - Waters Set Apart for specified periods
 - Trappers, Fur-Dealers and Tanners
 - Open Season for Sharp-tailed Grouse &c.
 - Crown Game Preserves
 - Waters Set Apart for specified periods

The Provincial Parks Act

O.Reg. 204/60 - Amending O.Reg. 144/57
 O.Reg. 61/61 - Amending O.Reg. 167/58

- Designation of Parks
 - General

The Public Lands Act

O.Reg. 209/60 - Amending O.Reg. 85/53
 O.Reg. 215/60 - Amending O.Reg. 85/53
 O.Reg. 275/60 - Revoking O.Reg. 181/57

- Sale of Public Lands - General
 - Sale of Public Lands - General
 - Summer Resort Locations - Looncall Lake

The Wilderness Areas Act

O.Reg. 281/60 - New and
 revoking O.Reg. 248/59

- Wilderness Areas

The Wild Rice Harvesting Act

O.Reg. 261/60 - New

- General

ORDERS-IN-COUNCIL RECOMMENDED BY THE MINISTER OF LANDS AND FORESTS DURING THE YEAR 1960-61

THE CROWN TIMBER ACT

Numbers of Orders-in-Council

1495/60;	2442/60;	4031/60;	4677/60;	349/61;	861/61;
1592/60;	3002/60;	4032/60;	4751/60;	353/61;	862/61;
1593/60;	3319/60;	4217/60;	4752/60;	373/61;	874/61;
2111/60;	3388/60;	4255/60;	4997/60;	374/61;	928/61;
2153/60;	3455/60;	4256/60;	4998/60;	426/61;	987/61;
2154/60;	3534/60;	4477/60;	5153/60;	457/61;	1094/61;
2155/60;	3614/60;	4478/60;	5206/60;	458/61;	1112/61;
2156/60;	3615/60;	4557/60;	5293/60;	515/61;	1118/61;
2157/60;	3624/60;	4558/60;	5294/60;	643/61;	1236/61;
2240/60;	3822/60;	4619/60;	5318/60;	644/61;	
2267/60;	3851/60;	4620/60;	5427/60;	645/61;	
2391/60;	3905/60;	4621/60;	75/61;	653/61;	
2392/60;	4022/60;	4646/60;	193/61;	716/61;	
2393/60;	4024/60;	4676/60;	290/61;	766/61;	

THE EXECUTIVE COUNCIL ACT

Numbers of Orders-in-Council

1595/60;	2544/60;	88/61;
2098/60;	3299/60;	968/61;
2131/60;	4831/60;	1200/61;
2445/60;	5412/60;	1212/61;

THE FINES AND FORFEITURES ACT

Numbers of Orders-in-Council

5351/60;
291/61;

THE FOREST FIRES PREVENTION ACT

Numbers of Orders-in-Council

1940/60;
2781/60;

THE FORESTRY ACT

Numbers of Orders-in-Council

3005/60;
30/61;

THE GAME AND FISHERIES ACT

Numbers of Orders-in-Council

1941/60;	2183/60;	3003/60;	4103/60;	4750/60;	1169/61;
2176/60;	2636/60;	3625/60;	4122/60;	4844/60;	
2181/60;	2779/60;	3634/60;	4475/60;	596/61;	
2182/60;	2780/60;	4098/60;	4580/60;	597/61;	

THE LAKE OF THE WOODS CONTROL BOARD ACT

Numbers of Orders-in-Council

1902/60; 4126/60;
4123/60; 312/61;

MISCELLANEOUS

Numbers of Orders-in-Council

4762/60; 863/61;
4847/60;

THE MUNICIPAL ACT

Numbers of Orders-in-Council

4452/60; 768/61;
352/61;

THE NIAGARA PARKS ACT

Numbers of Orders-in-Council

3318/60; 3778/60;
3769/60;

THE ONTARIO NORTHLAND TRANSPORTATION COMMISSION ACT

Numbers of Orders-in-Council

2398/60;

THE PROVINCIAL PARKS ACT

Numbers of Orders-in-Council

3087/60;
1168/61;

THE PUBLIC LANDS ACT

Numbers of Orders-in-Council

1489/60;	2655/60;	3665/60;	4556/60;	87/61;	769/61;
1599/60;	2828/60;	3711/60;	4629/60;	143/61;	770/61;
1738/60;	2833/60;	3765/60;	4630/60;	203/61;	864/61;
1829/60;	3004/60;	3840/60;	4753/60;	240/61;	872/61;
1950/60;	3014/60;	3841/60;	4756/60;	308/61;	930/61;
2177/60;	3089/60;	3844/60;	5175/60;	350/61;	931/61;
2276/60;	3209/60;	3854/60;	5304/60;	351/61;	1044/61;
2334/60;	3317/60;	4214/60;	5308/60;	479/61;	
2389/60;	3338/60;	4215/60;	5327/60;	610/61;	
2390/60;	3460/60;	4216/60;	5343/60;	612/61;	
2396/60;	3533/60;	4218/60;	5352/60;	615/61;	
2397/60;	3554/60;	4392/60;	5353/60;	636/61;	
2443/60;	3555/60;	4451/60;	5389/60;	637/61;	
2486/60;	3644/60;	4476/60;	74/61;	767/61;	

THE PUBLIC WORKS ACT

Numbers of Orders-in-Council

1939/60;
3317/60;

THE SURVEYS ACT

Numbers of Orders-in-Council

3762/60;

THE WILDERNESS AREAS ACT

Numbers of Orders-in-Council

4391/60;

THE WILD RICE HARVESTING ACT

Numbers of Orders-in-Council

4097/60;

Total number of Orders-in-Council..... 215
(Orders-in-Council passed under two statutes are shown
in both lists).

FEDERAL-PROVINCIAL CO-OPERATIVE AGREEMENTS

1. Weather Observation Services - Pickle Lake

By an agreement dated the 28th day of October, 1960, the agreement dated the 26th day of November, 1953 respecting the weather-reporting services at Pickle Lake Station in the Territorial District of Kenora (Patricia Portion) was amended by increasing the amount paid by Canada to Ontario in respect of the services performed by Ontario from \$82.66 a month to \$116.

2. Road Across Constance Lake Indian Reserve No. 92

By an exchange of letters between the Deputy Minister of Citizenship and Immigration dated July 18th and October 6th, 1960 and the Deputy Minister of Lands and Forests dated the 29th day of September, 1960, the Department was given permission to use a road right-of-way through Constance Lake Indian Reserve No. 92 for a term of ten years from July 1st, 1960, subject to a renewal if required and provided the Department of Lands and Forests maintains the road in summer and winter.

3. Campgrounds and Picnic Areas

The winter works programme respecting the development of campgrounds and picnic areas was continued under an exchange of letters from the Minister of Northern Affairs and National Resources to the Minister of Municipal Affairs dated the 23rd day of November, 1960 and the Prime Minister of Ontario to the Minister of Northern Affairs and National Resources dated the 10th day of November, 1960. Under the arrangements Canada agreed to reimburse Ontario for one half of the expenditures made by Ontario in respect of costs incurred on a campgrounds-picnic areas programme or the labour costs whichever are the lesser conducted between November 1st, 1960 and April 30th, 1961. Ontario was required to mark in a suitably-agreed form all

campgrounds and picnic areas developed under the programme since 1958 in a manner indicating that the facility provided had been provided under a co-operative federal-provincial programme. A further requirement was that the development be limited to provincial lands on the understanding that the development would continue to be owned by the province.

4. Construction of Forest Access Roads or Trails

By an agreement dated the 9th day of March, 1961, between the Government of Canada and the Government of the Province of Ontario as represented by the Minister of Forestry and the Minister of Lands and Forests respectively, Canada undertook to pay Ontario one half of the expenditures incurred by Ontario between December 1st, 1960 and the 30th day of November, 1961 up to a maximum of \$940,944 provided that all payments made by Canada under similar agreements with all provinces shall not exceed \$5,000,000 in approved projects which may consist of surveying and construction of forest access roads or trails and the clearing of Crown land boundary lines for the improvement of access to forest areas. The agreement defines the items in respect of which the federal contribution will be made and provides for interim advances.

5. Fur Management Agreement

By an exchange of letters between the Minister of Citizenship and Immigration and the Minister of Lands and Forests dated September 9th, 1960 and September 28th, 1960, respectively, it was agreed, subject to certain exceptions, to continue until March 31st, 1962 the fiscal arrangements created under the agreement of January 16th, 1950 between Canada and Ontario in respect of the management and development of fur resources in Northern Ontario. The maximum amount payable by Ottawa under these arrangements is \$75,000 a year. The payments by Canada shall not include any part of ordinary supervision of the fur development programme. The expenditures in connection with fur marketing including auction facilities at North Bay would be allowed. Also costs of research projects such as the Patricia inventory of game and fish and various biological lake surveys undertaken by Ontario and the cost of administration and supervision of commercial fisheries resulting from such surveys will be shared under the arrangement.

OPERATIONS BRANCH

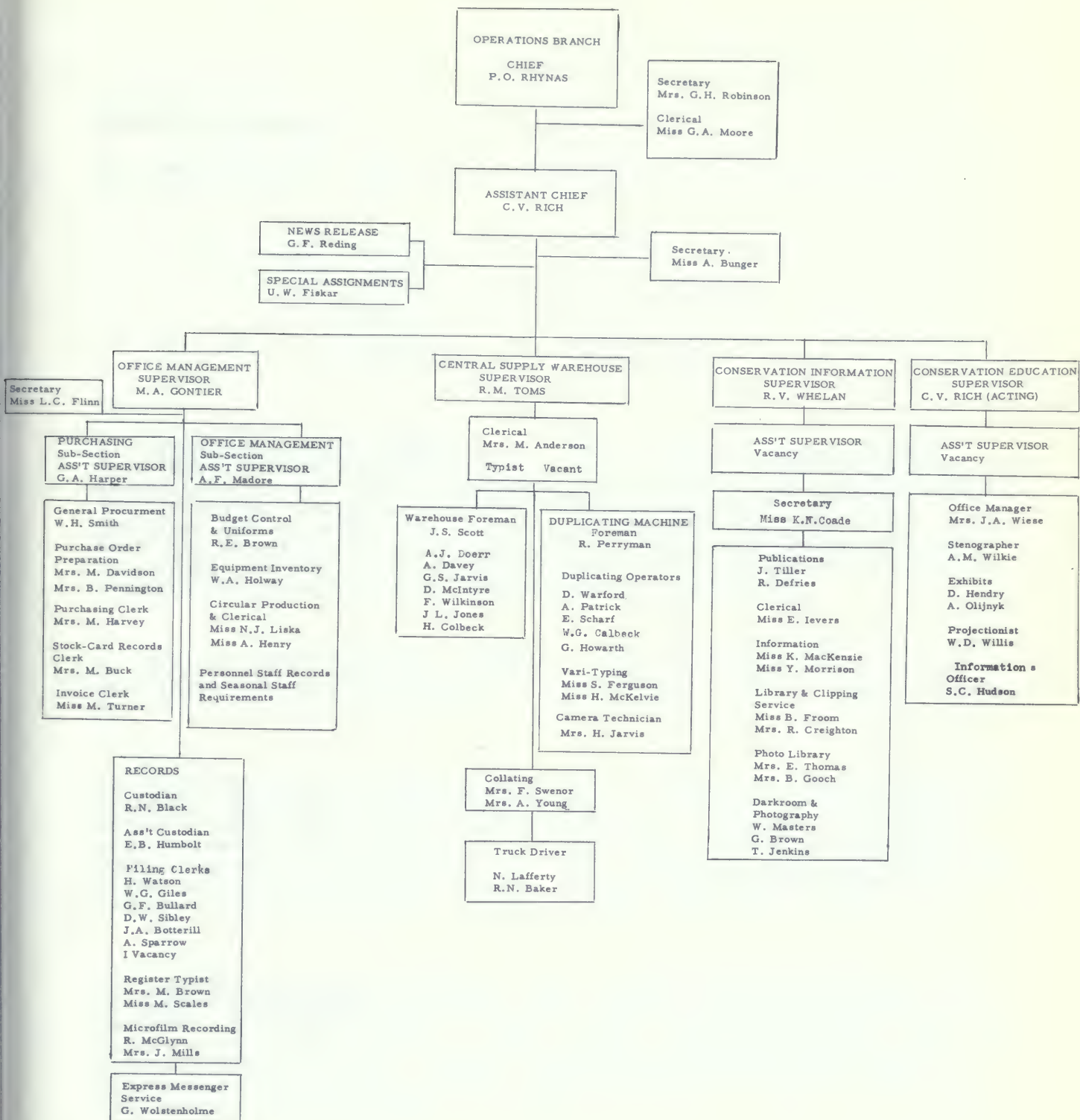


Photographic assignments cover many phases of the Department's activities, sometimes at great hazard to man and equipment.





Attendants at the Department's Information Booth are kept busy at major Ontario fairs answering questions pertaining to conservation and Department activities.



General Organization

As of March 31, 1961, the Operations Branch was composed of four sections:-

1. Office Management Section
2. Central Supply Warehouse Section
3. Conservation Information Section
4. Conservation Education Section

1. OFFICE MANAGEMENT SECTION directs most of the purchasing for the Department, generally, including all pertinent aspects such as tenders, quotations, current catalogue prices and the study of ever-changing products. The Section is responsible for - the inventory and control of office furniture and equipment; the condition of all office machines of the Department; the processing of all requisitions of stationery supplies for the Department; the control of supply and demand for uniforms; and the liaison required in the organization of conferences, meetings etc.

2. CENTRAL SUPPLY WAREHOUSE SECTION is charged with the receipt and maintenance of stock, the keeping of stock records, and the supply of equipment.

3. CONSERVATION INFORMATION SECTION issues weekly news and special press releases; operates a photograph, slide and cut service; handles a large volume of correspondence and personal enquiries on the use of renewable, natural resources; prepares special articles and background material for outside agencies; prepares and places both display and classified advertisements; maintains a reference library; and publishes more than 100 books, pamphlets and reports for Department use and general distribution.

4. CONSERVATION EDUCATION SECTION is responsible for the production and management of Departmental displays and exhibits throughout the Province (including the Canadian National Exhibition); for poster contests for school children; for the production of motion picture films dealing with fire control, timber products, fish and wildlife resources and parks; for preparation and delivery of lectures or discussions in schools and camps; and for radio and television broadcasts.

OFFICE MANAGEMENT SECTION

Office Management Subsection

Office Management is responsible for office services and the preparation of estimates which include equipment and supplies, stationery and office supplies, travel, maintenance and operating, payrolls and uniforms, publications, public appeals and public relations expenditures, etc.

2. The inventory of all major equipment in the province belonging to the department.

This includes trucks, cars, boats, canoes, power plants, shop equipment, tools, fire hose, outboard motors, office machines, etc. There are some 2,000 power units in the department including mobile, marine and stationary.

3. Invoices covering all purchases for head office and field offices are processed in Office Management as to fair price, confirmation of proper item, and actual receipt of material. The invoices are then coded to proper vote and item and forwarded to the Accounts Branch for processing and payment.

4. Circulars and Bulletins All circulars and bulletins required by the department are processed through this section after they are approved by the Circular Board. This involves the cutting of stencils, the follow-up through the duplicating room, and distribution. All revisions of circulars and bulletins in effect in the branch are carried through by this section - including an annual review to publish a list of the circulars and bulletins to be retained in effect. This involves close study and checking with all other branches as it might affect them.

5. Uniforms There are approximately 1,500 approved personnel in uniform on the staff of this department including seasonal Parks staff. A continuous record is kept of each individual's uniform account which is checked against requisitions for uniform items, and requisitions are approved according to scale of issue. Included in the estimates for the coming fiscal year must be a very accurate estimate of funds required for the uniform programme. An application for each item of uniform is sent to the manufacturer together with measurement chart. Constantly changing problems such as size, fit, and type, of individual requirements must be resolved. This section

produces and revises a manual which controls the scale of issue, proper uniform dress, etc.

6. Records Records pertinent to all Crown Lands of the province of Ontario are controlled through the Records Office of the section. Assembly, indexing and classification of all incoming correspondence, compiling of new files and distribution to the offices in which officials require any particular file, as well as housing and maintaining an accurate inventory of all files, are the main responsibilities of this office. There are approximately 500 files sent out and returned in any given day. Every new letter pertaining to any of 300,000 files is recorded, sent to the pertinent offices for handling, and finally added to the proper file for record. During the current fiscal year, records files up to and including all plans and surveys to the end of 1915, were microfilmed.
7. Boat Licensing The Office Management Section is responsible through the Federal Department of Transport for the processing of applications for licences for all department boats. Some marine units of the department require only a licence number, and others require registration showing home port, tonnage, dimensions, etc., depending on the specifications of the marine unit in question. Specifications of the boats supplied to this section are used to prepare the necessary applications for licences including tonnage, etc.
8. Special Assignments Because of the nature of the work generally covered by this section, there is almost a daily demand for the handling of requests for services where immediate action and organization is required.

Purchasing Subsection

With the continued expansion and the resulting need of equipment and office material procurement in this fiscal period was as active and widespread as ever. Among the various activities carried out by this subsection, there was basically the constant concern of demand and supply whether it was space requirements, stationery, equipment, furnishings, services such as the care of office machines, transportation, accommodation and conferences. Back of this basic demand were the many, often involved, details of investigation and procurement.

As has been related in the past, all requisitions are forwarded to the Purchasing Subsection for processing, that is, the registering of all requisitions and the recording of same on stock inventory cards where applicable, and the ordering by direct purchase orders or by requisitions to the Queen's Printer and the Department of Public Works. There were approximately 9,000 requisitions received, and many and varied details entered into the consideration and finalization of each item, involving telephone usage, correspondence and the calling of tenders.

New items in office equipment and supplies, and developments on existing ones, were investigated. District and head offices were kept informed of these matters and their suppliers where it was deemed warranted, and, whenever possible, descriptive sheets and pamphlets were sent the forementioned offices.

Direction and oversight of leases and rentals of properties for this department throughout the province was maintained by this subsection in conjunction with the Department of Public Works.

Special assignments, accommodation, meeting arrangements and transportation were also undertaken by this subsection in its widespread and diversified activity.

CENTRAL SUPPLY WAREHOUSE SECTION

This section is responsible for the receipt of stock, housing and distribution of supplies to head office, regions and districts throughout the province.

Stockroom

In the course of the fiscal year, some 335 tons of commodities were received and 308 tons shipped by means of express, freight, mail, transport, and by internal supply to department offices in the metropolitan area, representing a wide cross-section of needs.

Duplicating Room

The work of this subsection includes reproduction, collating and stapling of; news releases, bulletins, circulars and miscellaneous material.

Uniforms

This subsection is concerned with stocking and issue of all uniform items. Records of all uniform items received and issued are maintained in conjunction with the Office Management Section.

Licence Room

There were thirty various types of licences distributed -- hunting, angling, trapping, trapline, guide, frog, dip-net, roll net, gill net, bait fish -- to district offices and licence issuers throughout the province.

The quantities of licences received for distribution ranged from 500 to 500,000. The number of licences prepared and checked for mailing and express totalled 1,363,712, and were forwarded in 13,296 parcels to over 2,800 issuers.

In addition to the foregoing, Provincial Park Annual Vehicle Entrance Permits, Daily Permits and Camp-Site Permits were also distributed.

CONSERVATION INFORMATION SECTION

The Section is responsible for the dissemination of information concerning department operations and the conservation of the great renewable, natural resources under Lands and Forests administration. As detailed below, the Section works through many media to make its appeal to the public as effective and comprehensive as possible.

NEWS

The Department's news release is mailed every week to all daily and weekly newspapers and all radio and television stations and all wire services in Ontario. Its total circulation of 1,850 includes outdoor writers, class magazines, house organs, sports clubs, conservation groups and hunters' and anglers' associations.

Written in news style by Section staff, the weekly release is easily adapted and frequently used by outside agencies. The use of its material by outdoor writers and editors in the United States makes an important contribution to the province's tourist trade. In all areas, its distribution of regulations and informed opinion reaches the public through local papers and broadcasting stations.

The release also catches the editorial eye with a listing of coming conventions and other events of interest to anglers, hunters, campers, naturalists, conservationists, and professions and industries concerned with Lands and Forests operations.

News of more than normal urgency is given immediate public notice by spot press releases which go directly to important news outlets.

PHOTOGRAPHS

The Section operates a darkroom and maintains a photograph library which contains approximately 15,000 black-and-white 8" x 10" photographs, 2,000 colour (35mm) transparencies, 200 ektachrome (4" x 5") transparencies, and a stock of half-tone and line cuts used in Department publications.

During the past fiscal year, the photograph library loaned approximately 100 cuts to publishers; 200 colour transparencies for lectures and displays and 9,000 photographs to schools and publishers of newspapers and magazines.

ADVERTISING

The Department's conservation programmes are supported by display advertisements prepared and placed by the Section in newspapers, sports magazines and programmes, nature periodicals and trade papers of fishery and forest industries. During the fiscal year the Section placed two newspaper series and forty-seven separate advertisements mainly devoted to the prevention of forest fires.

During the same period, the Section placed a total of fifty administrative advertisements in thirty-four newspapers to call for tenders for timber cuttings and other purposes.

ARTICLES

Articles are written on request for newspapers and magazines when the subject is related to some aspect of Department operations. Illustrative photographs are usually supplied to attract reader interest.

Department personnel are often invited to address sports clubs, conservation groups and service organizations at meetings and banquets. A number of these addresses are prepared by Section staff.

The Section also prepares background information for outside writers, publishers and broadcasters. This supply of material to outside agencies greatly increases the concentration of conservation messages.

CORRESPONDENCE

Letters and postcards arrive daily from various parts of Canada, United States and other countries asking for information on angling or hunting regulations, tourist accommodations, and camping facilities, summer cottage properties, forest tree seedlings for planting, etc. Students and teachers at schools and universities apply for information of a scientific nature.

During the fiscal year, Section staff returned 29,200 answers by mail, an increase of 3,200 over the previous year. This total does not include the numerous requests for information answered over the telephone.

LIBRARY

The Section's reference library contains copies of all Department literature and various books and publications, including early reports and legislative journals dating from 1856.

REPORTS

ANNUAL REPORT OF THE MINISTER (Part I) presents a detailed account of Department operations during the preceding fiscal year as prepared by separate branches and sections. HIGHLIGHTS of the Annual Report (Part II) is a charted and pictographed condensation of the Annual Report prepared for publication by Section staff.

A STATISTICAL REFERENCE OF LANDS AND FORESTS ADMINISTRATION is a pocket-size book which provides in convenient form, a record of the Department's administration across the past few decades.

LIST OF PUBLICATIONS

(x indicates publications issued during the 1960-61 fiscal year)

FISH AND WILDLIFE

Sport Fishes of Ontario (Chart in Colour).....	\$1.00
Population Studies of Ring-Necked Pheasants on Pelee Island (Wildlife Series No. 4).....	\$2.00
Starvation of Deer on Navy Island (Wildlife Series No. 5)	
A Study of Some Deer and Forest Relationships in Rondeau Provincial Park (Wildlife Series No. 7)	
Game Birds Need Cover	
Guide's Manual.....	\$0.25
Fishing in Lake Simcoe.....	\$2.00
Ten Commandments of Gun Safety	
Why Hunter Safety Training?	
Tarentorus Trout Rearing Station	
x Trapper's Manual (revised)	
x The Game and Fisheries Act and The Ontario Fishery Regulations	
x Summary of the Ontario Hunting Regulations	
x Summary of the Ontario Fishery Regulations	
x Extract from Fishery Regulations (Poster)	
x Summary of Ontario Trapping Regulations	

FOREST PROTECTION

Aerial Cargo Dropping
Tommy Grey Wolf
Forest Fires Prevention Act
Wings Over Ontario
Fire Boss
Forest Protection in Ontario.

LANDS AND SURVEYS

List of Water Powers.....	\$0.75
List of Geographical Townships.....	\$0.50
A Second Look at Aerial Surveys	
Ontario Surveys and the Land Surveyor	
Ontario Resources Atlas.....	\$1.00
Price List of Lithographed Maps and Plans	
Lands for Settlement	
x Summer Resort Lands (revised)	

LAW

Complete Set of 21 Acts administered by the Department
(without binders).....\$5.00

OPERATIONS

- x A Teacher's Guide to Forest Conservation
- x Operation: Survival in the Woods
- x Meet the Wildlife of Ontario's Outdoors.....\$0.35
- x Camping in the Muskoka Region.....\$2.00
- x Dictionary of Terms
- Camping Safety Folder
- x Annual Report of the Minister of Lands and Forests
 - Part 1 - Detailed
 - Part 2 - Highlights
- x A Statistical Reference of Lands and Forests Administration
- x Administrative Branches Chart
- x List of Publications for Distribution
- x SYLVA, Your Lands and Forests Review, discontinued in February, 1961. The following reprints of articles which appeared in SYLVA are still available:

 The Massasauga Rattler

 Snakes Alive

 The American Smelt

 The Bowfin

 The Brown Bullhead

 The Channel Catfish

 The Rock Bass

 The White Bass

 The Yellow Pikeperch

 The Yellow Perch

 The Lake Trout

 The Northern Pike

 The Shallowwater Gisco

 The Pumpkinseed

 The Lake Sturgeon

 The White Sucker

x The Carp

x The Rainbow Trout

x The Smallmouth Black Bass

x The Largemouth Black Bass

x The Atlantic Salmon

x The Aurora Trout

x Forests for the Future

x The Ontario Tree Seed Plant

PARKS

- Algonquin Story.....\$2.00
- Algonquin Park Booklet
- Algonquin Park Canoe Routes
- Quetico Park Canoe Routes
- Serpent Mounds Provincial Park
- Check-list of Birds - Rondeau
- Check-list of Trees, Shrubs and Woody Vines - Rondeau
- Reptiles of Algonquin Park
- Check-list of Ferns, Fern Allies and Herbaceous Flowering Plants - Algonquin
- Check-list of Mammals - Algonquin
- A Guide to Anglers in Algonquin Park
- Provincial Parks in Ontario (Canadian Geographical Reprint)
- x Provincial Parks of Ontario (revised)
- x So You Want to Go Camping
- x Check-list of Ferns, Fern Allies and Herbaceous Flowering Vines - Rondeau
- x Check-list of Birds - Algonquin
- x Check-list of Trees, Shrubs and Woody Vines - Algonquin
- x Check-list of Fishes, Amphibians and Reptiles - Algonquin

PERSONNEL

- x Ontario Forest Ranger School Prospectus
- x Ontario Forest Ranger School (Information Brochure)
- x Ontario Forest Ranger School Year Book

RESEARCH

- Currents and Water Masses of Lake Huron (Report No. 35)
- Experiments with Root and Top Pruning of White Spruce Nursery Stock (Report No.36)
- An Experiment with Wrapping Materials for Bales of Nursery Stock (Report No.37)
- Forest Research in Ontario
- Growth of Second Growth Red and White Pine in Southeastern Ontario
- Forest Tent Caterpillar
- An Experiment on Culling and Grading of White Spruce Nursery Stock. Part A: The Percentage of Cull (Report No.38)
- Experimental Planting of Tubed Seedlings (Report No.39)
- An Underplanting and Release Experiment, 1954-58 (Report No.40)
- A Field Test of Dunemann Stock (Report No.41)
- Forest Site Evaluation in Ontario (Report No.42)

TIMBER

- Manual of Scaling Instructions
- Manual of Timber Management, Part 4: Timber Marking for Special Cutting Operations.....\$0.50
- Forest Resources Inventory Reports:
 - No. 1 North Bay
 - No. 2 Temiskaming
 - No. 3 Cochrane
 - No. 4 Kapuskasing
 - No. 5 Geraldton
 - No. 6 Port Arthur
 - No. 7 Algonquin
 - No. 8 Parry Sound
 - No. 9 White River
 - No. 10 Sudbury
 - No. 12 Chapleau
 - No. 13 Gogama
 - No. 14 Fort Frances
 - No. 15 Kenora
 - No. 16 Sioux Lookout
 - No. 17 Kemptville
 - No. 18 Tweed
 - No. 19 Lindsay
 - No. 20 Lake Simcoe
 - No. 21 Lake Huron
 - No. 22 Lake Erie
 - No. 23 Potentially Exploitable Area
 - No. 24 Normal Yield Tables
 - No. 25 Cull Studies
- Reforestation in Ontario.
- The Farm Woodlot
- Woodlot Improvement
- Planning for Tree Planting
- Care and Planting of Forest Trees
- Forest Tree Planting
- Manual of Seed Collecting
- Forest Trees of Ontario.....\$0.50
- x Hardwood Trees of Ontario.....\$0.50
- x Fifty Years of Reforestation in Ontario *\$0.50
- x The G. Howard Ferguson Forest Station

* By E.J. Zavitz

CONSERVATION EDUCATION SECTION

Conservation Education Section conducts an educational programme which consists of the type of appeals calculated to attract public interest and explain in easily understandable terms the need for the wise use of the renewable natural resources.

JUNIOR CONSERVATION TROPHY

This trophy was presented to the Ontario Federation of Anglers and Hunters at its annual convention held in Timmins on January 21, 1961 by the Hon. J. W. Spooner. This very beautifully made trophy will be in competition for the first time in 1961 by the Junior Clubs in the Province that are members of the Ontario Federation of Anglers and Hunters.

VISUAL EDUCATION

Head Office Film Library now contains 234 titles, with two or more prints of many of the titles. All films are available for loan to Field Offices upon request. During the year, more than 500 requests were filled, and these consisted of from one to six titles, each.

Seven 16 mm sound projectors with 12" speakers were purchased for replacement in the Field. Each District has its own projector and it has access to Regional Film Libraries as well as Head Office Film Library. Ten new projection screens were purchased during the year.

This Section loaned 16 mm motion picture projectors, 35 mm slide projectors, screens and films to the Provincial Parks offering an interpretive programme to the public during the summer months.

16 mm Film

Several thousand feet of motion picture film is available for use on television and was used by T. V. outlets throughout the Province. The section produced one new colour/sound film entitled "Springtime's Harvest" - 22 minutes, and one colour/silent film "Harvesting Wild Rice" showing the Indians harvesting wild rice at Whitefish Lake - 10 minutes. A new film, "Parks for the People" was started and this will probably be completed in 1961/62.

During the year, the following films were added to Head Office and Field Film Libraries:

- "Ahmeek - The Forest Engineer"
- "Aim for Safety"
- "Beaver Trapping"
- "Be Seen"
- "Bird Neighbours"
- "Birth of a Caterpillar" (silent)
- "Caribou Hunters"
- "The Changing Forest"
- "The Changing Maple Country"
- "Choosing a Leader"
- "Colour of Life"
- "Death is a Careless Hunter"
- "Emergence of a Dragonfly" (silent)
- "Famous Fish I Have Met"
- "Forest Fire Ranger" (1 minute)
- "Forest Fire Suppression"
- "Forest Wardens"

"Hen Hop"
 "Holiday Island"
 "Indian Canoeman"
 "Indian Hunters"
 "Land in Trust"
 "Le Merle"
 "Log Rolling"
 "Look Before You Leap"
 "The Loon's Necklace"
 "Micro Movies"
 "One Little Indian"
 "Point Pelee - Nature Sanctuary"
 "Poison Ivy Picnic"
 "Quetico"
 "Roadrunner Battles Rattlesnake"
 "Romance of Transportation"
 "Riches of the Earth"
 "Safety on the Water"
 "Smoke and Weather"
 "The Spawning of a Fish" (silent)
 "Spearheads in the Sky"
 "Spirit of Algonquin"
 "Springtime's Harvest"
 "Survival in the Bush"
 "That they May Live"
 "Ti Jean Goes Lumbering"
 "Tomorrow's Timber"
 "Trees are a Crop"
 "Wildlife and the Human Touch"
 "Woodland Manners"

RADIO AND TELEVISION

Radio and television stations throughout the Province have been most generous in their donations of free time to the Department, and Districts regularly take advantage of these opportunities to reach the public. In addition to radio programmes, several Districts now conduct regular, live television broadcasts of their own. The Section also supplies Districts with films for use on television.

EXHIBITS

Visual conservation appeals are featured in the Department's exhibits at some seventy-five of the most popular shows and fairs in Ontario. The major exhibits were as follows:

Canadian National Exhibition - Toronto

Many new improvements were made to our exhibit area in the Ontario Government Building this year. The mound contained a nature trail where trees were planted and identified. The display around the centre mound included Hunter Safety Theatre, Parks, Timber Management with a story told by the rear projection of 35 mm slides, Forest Protection featuring a talking Smokey Bear, Snakes, Ontario Fish and the building of snowshoes, canoe paddles and axe handles in our trappers scene which included a display of furs. Ontario's animal wildlife was also displayed in cages encircling the centre mound.

The Conservation Poster Contest for Elementary School children from six to fourteen years of age was held again this year. A Grand Prize of \$100.00 was presented for the best poster. First, second and third prizes, in each of three age groups, in amounts of \$50.00, \$25.00 and \$15.00 were awarded. Thirty Honourable Mentions, ten in each age group, were presented with books.

Canadian National Sportsmen's Show - Toronto

Our exhibit featured Hunter Safety Theatre, Trapper's scene with a fur display and Forest Protection featuring an animated fire scene with the talking Smokey Bear. Fish, animals and birds were also displayed.

Central Canada Exhibition - Ottawa

Displays of Parks and Forest Protection were used this year, and new animal cages installed. Fish were also shown.

International Plowing Match - Springfield, Ontario

Reforestation was the theme of this exhibit and a display illustrating the Dutch Elm Disease, and a tree planting demonstration. Animals and birds were also included in the display.

Royal Agricultural Winter Fair - Toronto

The panoramic Timber Model showing Saw Mill operations was used for our exhibit in this Fair along with cages of animals and birds.

All Districts co-operated with the Section to make Departmental exhibits at local fairs a success. All material for major exhibits is prepared and displayed by the Section; later, it is released for use by the Districts. Permanent exhibits, suitable for transporting, have been emphasized to gain the maximum use of each appeal.

Six new portable animated displays, constructed to withstand transportation, have been added to our available display material. Three of these illustrate woodlot management, and three describe causes of forest fires.

LECTURE TOURS

Officers of the Department keep in constant touch with the public through fish and game associations, schools, church groups, service clubs and youth organizations. Illustrated lectures are given on all aspects of the Department's work. The following table provides a summary of the public lectures delivered by Head Office and Field Staff during the fiscal year. A summary of lecture tours which were carried out by the Ontario Forestry Association during the same period is shown below the Department figures.

REGION	DISTRICT	SCHOOL MEETINGS		PUBLIC MEETINGS		TOTAL	
		NO.	ATTEND	NO.	ATTEND	NO.	ATTEND
Western	Fort Frances	50	3311	81	3756	131	7076
	Kenora	7	371	49	3447	56	3818
	Sioux Lookout	8	1189	13	452	21	1641
Mid-Western	Geraldton	30	2619	15	524	45	3143
	Port Arthur	18	765	98	6154	116	6919
Northern	Cochrane	60	8937	39	1112	99	10049
	Kapuskasing	26	5401	60	5419	86	10820
	Swastika	22	2244	56	2698	78	4942
Central	Chapleau	4	1260	13	422	17	1682
	Gogama	12	500	15	273	27	773
	S. S. Marie	2	165	48	2654	50	2819
	Sudbury	86	9065	47	2033	133	11098
	White River	8	1299	18	794	26	2093
South-Central	North Bay	36	3443	83	6769	119	10212
	Parry Sound	99	4414	98	3061	197	7475
	Pembroke	38	2176	117	20222	155	22398
South-Eastern	Kemptville	38	2413	173	10641	211	13054
	Lindsay	87	4105	230	14721	317	18826
	Tweed	136	5087	200	8782	336	13869
South-Western	Lake Erie	55	3011	552	34196	607	37207
	Lake Huron	17	3114	435	20517	452	23631
	Lake Simcoe	187	15126	758	39039	945	54165
Ontario Forestry Association				401	48756	401	48756
TOTALS		1026	80015	3599	236442	4625	316457

PARKS BRANCH



The serene beauty of lake, forest and sky -- and the freedom to enjoy it -- this is the appeal of Provincial Parks, as at Oastler Lake, Parry Sound District, above.



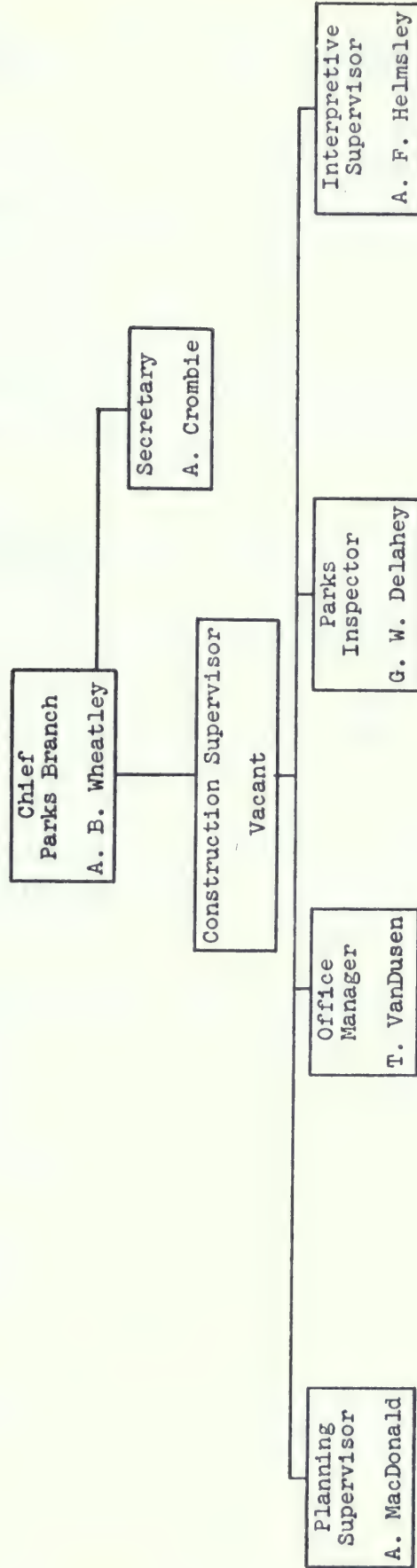
An extensive sand beach is one of the features provided for the benefit and enjoyment of all in many of the provincial parks under public ownership.



Rapids, rocks and solitude -- a formula for complete relaxation and inspirational enjoyment. Above: Oxtongue River, Algonquin Provincial Park.

ORGANIZATION CHART

PARKS BRANCH



PARKS BRANCH
RESPONSIBILITIES AND FUNCTIONS

Provision, operation and maintenance of provincial parks as public recreational lands with facilities necessary for uses in keeping with the park environments;

Examination of potential park areas;

Submission of recommendations regarding potential and proposed provincial park areas to the Ontario Parks Integration Board;

Production of detailed master plans for provincial parks;

Development of provincial parks in accordance with the master plans;

Design and construction of provincial park structures and buildings.

Establishment, operation and maintenance of interpretive programmes and exhibits in provincial parks of natural and/or historical significance;

Collection, compilation and assessment of provincial park statistics.

In 1960, a total of 75 provincial parks were open for public use. Of the 75 provincial parks, 63 made entrance and camping charges; the remaining 12 were open without charges. In addition, 16 provincial park areas, closed to the public, were either under development or reserved for future development.

Provincial park statistics again showed an increase in the amount of public use. The general visitation increased to 5,692,578, an increase of 11.4%, while the numbers of campers increased by 23% to 592,103. Since 1956, the numbers of campers have increased by 583%.

The development of existing parks and new park areas was continued with the assistance of the Federal/Provincial Unemployment Relief Programme. Under this programme, the total expenditure amounted to \$1,216,731.02, of which 50% was contributed by the Federal Government. An amount of \$1,500,000.00 was also made available for park development and land purchases.

During 1960, improvements included the provision of 3,000 new campsites, the development or improvement of 67 miles of roads, additional parking for 5,000 cars, the construction of 21 boat launching ramps, the planting of more than 350,000 trees, the construction of approximately 500 earth type toilets, 11 picnic shelters and five flush type comfort stations. Through the facilities of the Department of Reform Institutions, there were constructed 7,100 picnic tables, 3,710 fireplace grills and 100 barbecue grills. The latter were placed in selected day use areas as an experiment and proved very popular with park users.

Programmes of park interpretation were continued in five provincial parks with complete programmes of museums, conducted trips, evening lectures and labelled trails. In addition, historical exhibits were again presented at Sibbald Point, Serpent Mounds and Nancy Island (Wasaga Beach) Provincial Parks. A labelled trail was added at Remi Lake Provincial Park. These programmes and exhibits, designed to familiarize visitors with the natural and historical features of the park environments attracted, in 1960, a total of 375,989, an increase over the 1959 total of 21%.

Winter recreational activities were introduced in three provincial parks on an experimental basis to assess the nature and extent of the potential winter use of provincial parks. Kakabeka Falls Provincial Park offered 22,617

winter visitors iced toboggan runs and skating. Pinery Provincial Park provided ski runs and toboggan runs for 1,954 visitors and as many as 500 skaters at one time were recorded at Darlington Provincial Park. No charges were made this year for these services, although some expenditures were necessary to make the facilities available.

A revision was made in provincial park charges, in 1960, to increase the camping fees from \$.75 to \$1.00 per day and the weekly camping rate from \$4.00 to \$5.00. The seasonal vehicle entry fee was increased from \$1.00 to \$2.00. As an alternative, a daily vehicle entry fee of \$.50 was introduced.

TABLE NO. 1
PROVINCIAL PARKS ESTABLISHED
 (as of March 31, 1961)

<u>Administrative District</u>	<u>Name of Park</u>	<u>Date Established</u>
Lake Erie	Clay Creek	Sept. 29, 1958
	Holiday Beach	Oct. 6, 1958
	Ipperwash	June 24, 1938
	John E. Pearce	June 25, 1957
	Long Point	May 3, 1921
	Pinery	Oct. 11, 1957
	Rock Point	June 25, 1957
	Rondeau	May 5, 1894
	Turkey Point	April 21, 1959
Chapleau	Five Mile Lake	Sept. 29, 1958
Cochrane	Greenwater	June 25, 1957
	Kettle Lakes	June 25, 1957
Fort Frances	Caliper Lake	July 22, 1960
	Quetico	April 1, 1909
Geraldton	Klotz Lake	July 22, 1960
	Blacksand	July 22, 1960
Gogama	Ivanhoe Lake	June 25, 1957
Kapuskasing	Nagagamisis	June 25, 1957
	Remi Lake	June 25, 1957
Kemptville	Silver Lake	Sept. 29, 1958
	South Nation	July 22, 1960
Kenora	Aaron	Sept. 29, 1958
	Blue Lake	July 22, 1960
	Rushing River	Sept. 29, 1958
	Sioux Narrows	June 25, 1957
Lindsay	Darlington	Oct. 30, 1959
	Emily	June 25, 1957
	Mark S. Burnham	July 26, 1955
	Presqu'ile	May 18, 1922
	Serpent Mounds	June 25, 1957
Lake Simcoe	Bass Lake	June 25, 1957
	Sibbald Point	Dec. 23, 1957
	Six Mile Lake	Feb. 24, 1958
	Springwater	Sept. 29, 1958
	Wasaga Beach	Aug. 31, 1959
North Bay	Marten River	July 22, 1960
Parry Sound	Grundy Lake	April 21, 1959
	Sturgeon Bay	July 22, 1960
Pembroke	Algonquin	May 27, 1893
Port Arthur	Arrow Lake	June 25, 1957
	Inwood	Sept. 29, 1958
	Middle Falls	July 22, 1960
	Sibley	Jan. 13, 1944
Sault Ste. Marie	Lake Superior	Jan. 13, 1944
Sudbury	Fairbank	June 25, 1957
	Windy Lake	April 4, 1959
Swastika	Esker Lakes	June 25, 1957
	Kap-Kig-Iwan	June 25, 1957
Tweed	Black Lake	Sept. 29, 1958
	Lake on the Mountain	June 25, 1957

TABLE NO. 2

PARKS IN OPERATION AND PENDING ESTABLISHMENT

(as of March 31, 1961)

<u>Administrative District</u>	<u>Name of Park</u>
Lake Erie	St. Williams Port Bruce
Fort Frances	Lake of the Woods
Geraldton	MacLeod Lake Rainbow Falls
Lake Huron	Craigleith Sauble Falls Inverhuron
Kemptville	Rideau River Fitzroy
Lake Simcoe	Devils Glen Earl Rowe
North Bay	Finlayson Point Antoine Samuel de Champlain
Parry Sound	Oastler Lake Killbear Point Mikisew
Pembroke	Carson Lake Driftwood
Port Arthur	Kakabeka Falls Shuniah
Sault Ste. Marie	Pancake Bay Batchawana Bay
Tweed	Lake St. Peter Outlet Beach Sandbanks Mazinaw Lake

TABLE NO. 3
AREAS UNDER DEVELOPMENT OR RESERVED
FOR FUTURE DEVELOPMENT

(as of March 31, 1961)

<u>Administrative District</u>	<u>Name of Area</u>
Chapleau	Racine
Kemptville	Murphy's Point
Kenora	Pipestone
Lake Simcoe	Little Lake
North Bay	Haddo
Parry Sound	Restoule
Port Arthur	Silver Falls
Sioux Lookout	Pakwash Ojibway
Sudbury	Killarney
Swastika	McCann
Tweed	Bon Echo
White River	White Lake

TABLE NO. 4

SALE OF VEHICLE PERMITS AND CAMPSITE PERMITS

Administrative District and Park Name	Vehicle Permits				Campsite Permits			
	1957	1958	1959	1960	1957	1958	1959	1960
Lake Erie								
Rondeau	19,984	24,535	27,447	27,282	1,582	3,148	5,285	5,686
Ipperwash	7,171	13,794	12,210	11,787	2,981	4,747	6,165	5,854
Long Point		2,362	2,636	2,574	1,895	2,714	4,177	4,113
Holiday Beach		6,202	8,839	11,788				
Clay Creek		929	1,095	1,228			86	260
St. Williams		1,042	666	1,120				
Pinery			18,899	18,446			5,275	9,102
Cochrane								
Kettle Lakes	327	2,478	3,471	3,361	36	522	724	942
Fort Frances								
Quetico	1,580	1,922	2,168	2,264		452	826	1,178
Caliper Lake	506	764	1,231	1,555	732	737	1,154	1,435
Lake of the Woods				842				78
Geraldton								
Helen Lake	545	727			117	533		
MacLeod Lake	130	357	1,198	1,279	35	182	623	821
Rainbow Falls	65	180	281	274	50	121	162	311
Klotz Lake	28	72	261	199	75	428	907	901
Blacksand				277				399
Gogama								
Ivanhoe Lake				132				123
Lake Huron								
Craigleith	1,788	2,900	3,486	3,442	1,865	2,552	4,083	3,852
Sauble Falls	2,758	4,052	4,814	4,814	1,141	2,605	3,389	3,053
Inverhuron			5,169	4,961			2,884	4,437
Kapuskasing								
Remi Lake		705	1,235	1,408		219	603	778
Kemptville								
Silver Lake	2,988	3,405	3,496	4,134	1,709	2,161	2,624	3,237
South Nation	959	4,342	4,240	4,937	557	1,105	1,301	1,373
Rideau River		3,207	6,251	9,344		648	2,024	3,111
Kenora								
Aaron	476	844	795	1,283	335	576	657	1,043
Blue Lake	402	645	1,002	1,080	197	500	821	1,235
Rushing River	2,270	2,750	3,510	4,354	1,615	2,222	2,922	3,105
Sioux Narrows	289	530	868	1,454	321	560	1,171	1,622
Twin Lake	750	658			429	512		
Lindsay								
Presqu'ile	14,962	15,832	16,783	15,284	2,431	4,632	7,828	7,864
Emily		2,767	5,417	5,702		659	1,864	2,649
Serpent Mounds		1,891	3,792	4,798		582	1,700	3,214
Darlington				4,270				262
Lake Simcoe								
Bass Lake	2,431	5,006	7,217	6,926	1,021	2,919	4,188	4,568
Devils Glen	2,294	2,780	2,754	2,687	468	674	839	875
Sibbald Point	10,513	14,375	24,214	24,380	2,728	5,442	9,351	9,098
Springwater	13,996	13,584	13,876	13,572				
Earl Rowe				2,409				908
Six Mile Lake				2,640				2,334

TABLE NO. 4

(cont'd)

SALE OF VEHICLE PERMITS AND CAMPSITE PERMITS

Administrative District and Park Name	1957	Vehicle 1958	Permits 1959	1960	1957	Campsite 1958	Permits 1959	1960
North Bay								
Finlayson Point	388	621	851	995	679	1,098	1,574	2,003
Marten River	1,818	2,120	2,249	1,997	2,490	3,214	3,731	2,973
Antoine		720	856	1,051		271	835	1,236
Parry Sound								
Sturgeon Bay	665	1,000	1,028	1,321	1,121	1,346	2,007	1,726
Oastler Lake	2,749	3,135	4,120	4,007	2,593	3,162	4,556	4,208
Grundy Lake		661	1,244	2,264		1,259	2,793	3,544
Mikisew			793	1,037			1,036	1,858
Killbear				1,180				1,891
Pembroke								
Algonquin	38,536	42,385	43,991	48,609	8,549	12,553	15,759	17,526
Carson Lake	111	185	149	205	1,168	1,176	1,560	1,213
Driftwood		913	1,404	1,470		391	1,178	1,554
Golden Lake	365				609			
Port Arthur								
Sibley	849	3,112	3,262	1,919	264	680	889	1,090
Middle Falls	4,805	2,811	2,886	2,895	634	693	1,164	1,122
Shuniah	1,179	897	1,809	1,864	341	391	801	1,026
Kakabeka Falls	4,037	6,120	10,898	13,288	128	704	1,081	1,666
Inwood	777	709	304	508	594	846	550	652
Oliver Lake	795				25			
Sault Ste. Marie								
Pancake Bay		480	1,076	1,230		466	1,227	1,405
Lake Superior				803				782
Sioux Lookout								
Frog Rapids		52				149		
Perrault Falls		153				299		
Sudbury								
Windy Lake	2,350	2,020	4,219	3,930	394	802	1,165	921
Fairbank		502	1,196	1,700		232	1,238	1,987
Swastika								
Esker Lakes		1,000	1,156	1,300		145	534	860
Kap-Kig-Iwan			2,195	1,883			578	861
Tweed								
Black Lake	665	1,065	2,183	2,014	572	890	2,067	1,966
Lake St. Peter	418	634	936	883	544	1,082	1,577	1,217
Mazinaw	448	391	398	316	673	762	1,045	934
Outlet Beach			13,838	13,249			1,777	2,485
Other Offices	<u>321</u>	<u>428</u>	<u>97</u>					
TOTALS	<u>148,488</u>	<u>207,751</u>	<u>292,459</u>	<u>320,205</u>	<u>43,698</u>	<u>74,763</u>	<u>124,355</u>	<u>148,527</u>

TABLE NO. 5
RECORD OF PARK USE

Administrative District and Park Name		<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>
Lake Erie									
Rondeau	383,822	692,453	673,439	693,631	6,515	12,823	20,320	24,726	
Ipperwash	61,632	198,002	232,450	253,346	13,355	19,686	25,794	25,398	
Long Point		72,157	93,046	112,405	7,332	10,610	17,168	17,631	
Holiday Beach		76,080	94,697	154,196					
Pinery			248,220	371,866			22,109	37,008	
Clay Creek				29,719			330	1,022	
St. Williams				38,057					
Lake Huron									
Sauble Falls	45,298	116,812	179,766	141,119	4,194	9,801	13,074	11,544	
Craigleith	19,140	51,871	83,369	58,988	6,493	8,755	14,488	13,928	
Inverhuron			106,720	85,550			11,424	18,247	
Lake Simcoe									
Sibbald Point	78,039	153,879	316,011	379,901	9,557	19,566	35,378	35,535	
Bass Lake	72,100	100,266	154,127	139,840	3,744	9,445	17,749	18,559	
Devils Glen	40,294	25,262	47,722	68,805	1,630	2,395	2,971	3,149	
Springwater	96,919	190,679	131,984	113,620					
Six Mile Lake				46,758				8,714	
Earl Rowe				44,366				3,540	
Lindsay									
Presqu'ile	276,646	241,368	332,196	299,745	9,460	18,005	29,385	29,240	
Emily		25,113	96,300	102,452		2,505	7,252	10,385	
Serpent Mounds		24,191	76,250	73,963		2,097	6,101	12,125	
Darlington				52,681				1,064	
Mark S. Burnham				23,900					
Tweed									
Black Lake	13,810	10,621	46,059	32,157	2,172	3,288	8,350	8,535	
Lake St. Peter	9,603	25,348	32,394	22,173	2,052	3,305	6,115	4,778	
Mazinaw Lake	10,499	11,971	9,353	8,967	2,568	2,964	4,034	3,651	
Outlet Beach			272,047	160,640			7,464	14,478	
Kemptville									
Silver Lake	38,884	53,222	66,644	81,288	6,620	8,045	10,355	13,789	
South Nation	42,231	52,660	61,444	49,734	2,107	4,065	4,956	5,347	
Rideau River		54,555	80,877	174,255		2,604	7,811	12,379	
North Bay									
Antoine		14,467	38,907	32,951		1,299	3,017	4,480	
Finlayson	1,395	4,725	35,356	27,584	2,271	3,726	5,314	7,992	
Marten River	16,663	15,681	36,780	59,059	9,037	11,961	13,746	11,339	
Parry Sound									
Sturgeon Bay	18,952	22,634	33,300	27,382	4,035	4,595	7,238	6,408	
Grundy Lake		15,914	92,569	71,541		4,708	9,700	13,585	
Oastler Lake	57,934	67,666	106,071	145,061	9,534	11,884	17,195	16,455	
Mikisew			11,814	20,460			3,970	7,299	
Killbear				43,168				7,712	
Pembroke									
Algonquin	470,250	457,984	451,313	513,568	32,557	47,064	59,360	68,823	
Carson Lake	17,809	3,528	5,477	4,161	4,461	3,428	5,477	4,161	
Driftwood		6,634	11,736	10,720		1,454	4,487	6,329	

TABLE NO. 5

(cont'd)

RECORD OF PARK USE

Administrative District and Park Name		Total Visitors Entered				Total Campers			
	1957	1958	1959	1960	1957	1958	1959	1960	
Sudbury									
Windy Lake	39,040	44,896	95,995	84,414	1,815	2,990	4,805	3,747	
Fairbank			23,307	33,826			4,983	7,873	
Sault Ste. Marie									
Pancake Bay		2,755	32,467	31,489		1,805	5,014	5,543	
Lake Superior				16,086				3,246	
Gogama									
Ivanhoe				1,337				472	
Swastika									
Esker Lakes		7,668	12,739	23,367		509	1,772	3,225	
Kap-Kig-Iwan			27,497	24,135			2,050	3,079	
Cochrane									
Kettle Lakes		53,203	63,210	69,716	129	1,863	2,958	3,632	
Kapuskasing									
Remi Lake	8,922	24,025	33,243	34,871		811	2,280	3,128	
Geraldton									
MacLeod Lake			25,549	51,953			2,264	3,060	
Rainbow Falls							652	1,203	
Klotz Lake							3,227	3,391	
Blacksand								1,447	
Port Arthur									
Kakabeka Falls	38,087	70,370	120,333	162,703	477	2,467	4,230	6,805	
Inwood	17,889	9,670	6,274	9,333	2,110	3,065	2,061	2,772	
Shuniah	15,602	38,831	49,500	43,589	1,192	1,414	2,978	3,860	
Sibley	25,895	46,768	67,695	33,253	1,070	2,727	3,717	4,493	
Middle Falls	94,305	30,048	133,680	52,958	2,454	2,651	4,818	4,563	
Fort Frances									
Quetico	30,862	30,769	46,493	56,590		1,777	3,265	3,720	
Caliper	6,979	8,940	14,047	27,291	2,746	2,830	4,489	5,715	
Lake of the Woods				16,562				300	
Kenora									
Twin Lake	13,644	13,227			1,533	1,877			
Sioux Narrows	5,487	6,280	18,369	31,005	933	1,969	4,261	6,139	
Blue Lake	1,684	3,821	17,464	20,186	728	1,950	3,368	5,034	
Aaron	7,220	12,491	12,620	23,494	1,010	2,104	2,555	4,052	
Rushing River	27,532	42,955	47,433	74,643	5,777	7,833	11,190	12,249	
Provincial Totals	2,105,068	3,232,460	5,106,353	5,692,578	161,668	270,720	479,069	592,103	

TABLE NO. 6.

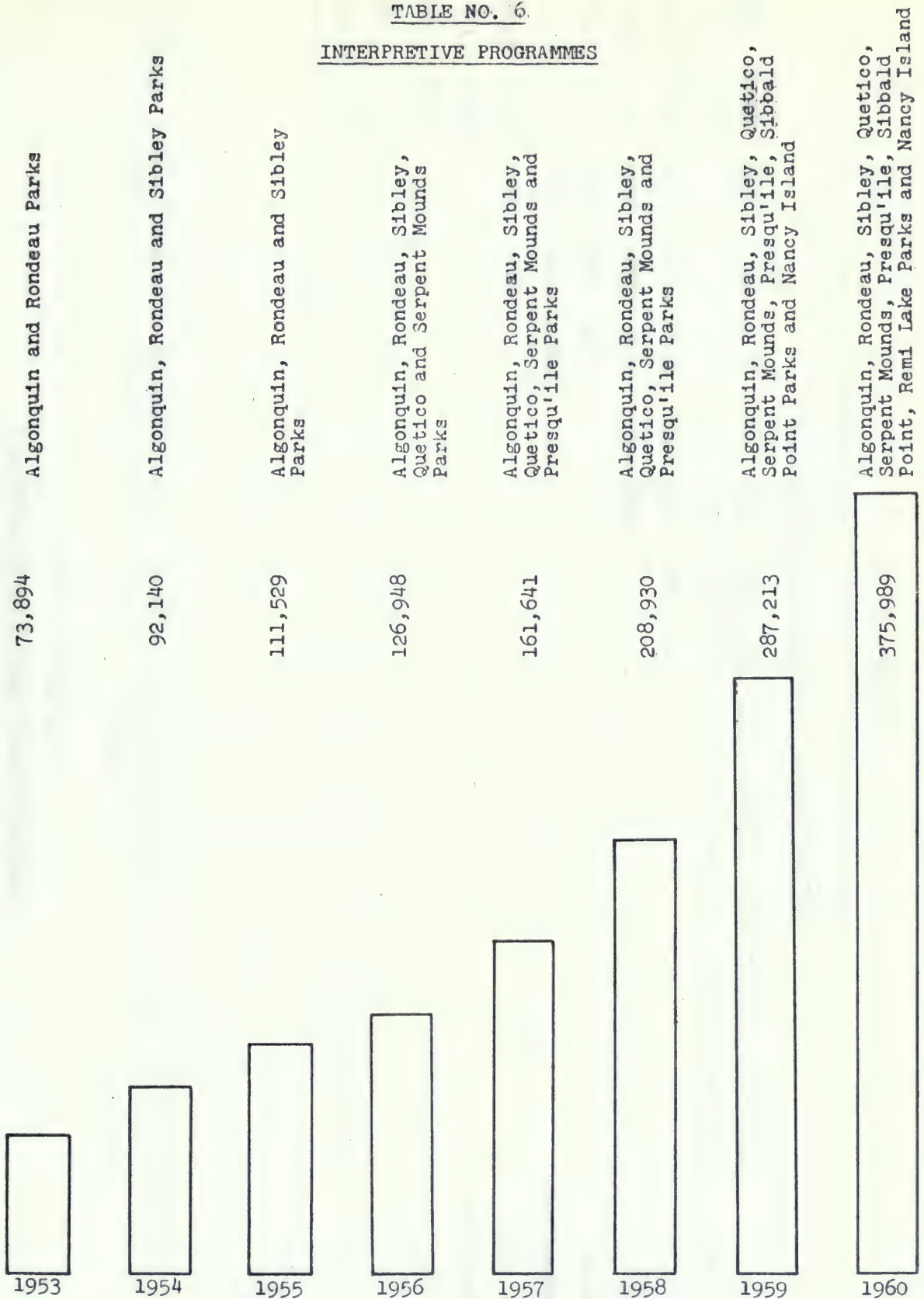
INTERPRETIVE PROGRAMMES

Diagram showing the increase in Interpretive Programme Attendances of Museums, Nature Trails, Conducted Trips and Lectures.

TABLE NO. 7

YEARLY ATTENDANCES OF PROVINCIAL PARK MUSEUMS

NATURE TRAILS, CONDUCTED TRIPS AND LECTURES

	<u>1944</u>	<u>1945</u>	<u>1946</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>
Algonquin Park	210	297	4178	6772	7885	1480	7766	8065	17496	71046	93410	99917	106946	126946	156570	196386	264357
Rondeau Park				903				814	2822	6953	7104	8527	13843	25780	34245	31537	
Sibley Park										2474	4525	5434	5862	9504	11431	10500	
Quetico Park												531	4360	5663	6247	10639	
Serpent Mounds Park												5661	7986	8100	5454	3675	
Presqu'ile Park												2689		3313	12154	23552	
Sibbald Point Park															12123	21571	
Nancy Island (Wasaga Beach Park)															9173	9998	
Remi Lake Park																	160
Totals	210	297	4178	7675	7885	1480	7766	8065	18310	73868	102837	111546	127099	161686	208930	287213	375989

TABLE NO. 8a

PROVINCIAL PARKS IMPROVEMENTS (BUILDINGS)

AS OF MARCH 31, 1961

District and Park	Administ- ration Buildings	Residences	In- formation Centres	Mainten- ance Buildings	Con- cession Buildings	Change Houses	Comfort Stations	Privies	Picnic Shelters	Museums
Aylmer										
John Pearce								4		
Rondeau	1	2	2	2	4	12	12	15	3	1
Ipierwash	1	1	1	1	1	4	5		2	
Pinery	1	1	3	1		12	5	64		
Clay Creek			1				1		1	
Long Point		2	2	1		8	2	22		
Port Bruce								4		
Rock Point	1		1	1		4		6		
St. Williams								4		
Turkey Point	1	1	1	1	3	1		22	1	
Holiday Beach	1	1	1	1	1	8	4	6		
Chapleau										
Five Mile Lake						2		32		
Cochrane										
Kettle Lakes			1	1	1	4		29	1	
Greenwater			1			2		10		
Fort Frances										
Caliper Lake		1	1	1		2	1	6	1	
Quetico	1	2	7	1	1	2	2	8	1	1
Lake of the Woods						2		6		
Geraldton										
Klotz Lake	1							6		
MacLeod	1			1		2		16	1	
Blacksand	1			1				10		
Rainbow Falls	1			1		2		16		
Gogama										
Ivanhoe			1			4		4		
Hespeler										
Craigleith		1	1	1	1	2	3		1	
Sauble Falls			1		1		3	2	1	
Inverhuron			1	1		3	2	35	1	

TABLE NO. 8a (cont'd)
PROVINCIAL PARKS IMPROVEMENTS (BUILDINGS)

AS OF MARCH 31, 1961

District and Park	Administ- ration Buildings	Residences	In- formation Centres	Mainten- ance Buildings	Con- cession Buildings	Change Houses	Comfort Stations	Privies	Picnic Shelters	Museums
Port Arthur										
Inwood			1	2				12		
Kakabeka Falls			1	3	1	2	1	8		
Middle Falls			1	1		2	1	4	1	
Shuniah			1	2		2		8		
Sibley	1		1	1		2		38	1	1
Sault Ste. Marie										
Pancake Bay		2	1	1		4		42		
Lake Superior				1		2		64		
Sioux Lookout										
Pakwash								2		
Sudbury										
Fairbank	1	1		1		3		22		
Windy Lake	1	1	1	1	1	3		30		
Swastika										
Kap-Kig-Iwan			1	1		2		22		
Esker Lakes			1			4		26	1	
Tweed										
Black Lake			1			2		26		
Lake St. Peter			1			2		8		
Lake on the Mountain							1			
Mazinaw Lake			1					8		
Outlet Beach			1	1	3	12	3	39		
Sandbanks	1	1						14		
Bon Echo								20		
TOTALS	25	41	75	40	31	212	84	1678	45	8

TABLE NO. 8b

PROVINCIAL PARK IMPROVEMENTS (GENERAL DEVELOPMENT)

AS OF MARCH 31, 1961

District and Park	Swimming Beaches (Feet)	Park Road (Miles)	Bridges	Camping Units	Picnic Area (Acres)	Picnic Tables	Parking Areas Car Capacity	Wells	Water Pressure Systems	Docks and Ramps	Hydro Lines (Miles)	Trees Planted	Canoe Routes (Miles)
Aylmer													
Turkey Point		7		210	8	300	300			1	$\frac{1}{2}$	1500	
Ipperwash	1600	$3\frac{1}{2}$	2	250	4	400	700		1	4	$\frac{1}{2}$	1500	
Clay Creek		1	1	37		177	200			4	$\frac{1}{2}$	2000000	3
Pinery	24400	22	2	1000	20	1770	5100	49	11	4	7	5000	
Rondeau	18500	$23\frac{1}{2}$		506	10	1483	1500	45	17	3	$10\frac{1}{2}$		
John Pearce		$3\frac{3}{4}$			2	25	50	1					
Long Point	6500	2		137	16	570	1500	16	5	1	$3\frac{3}{4}$	1000	
Holiday Beach	2000	3		56	83	2400	1778	5	5		$1\frac{1}{4}$	16826	
St. Williams		$1\frac{1}{2}$	1		5	45	100	1					
Rock Point	400	1		47	10	168	235					1000	
Port Bruce	1000	$1\frac{1}{4}$			10	50	200						
Chapleau													
Five Mile Lake	500	$3\frac{1}{2}$		87	2	115	42	6		3			
Cochrane													
Kettle Lakes	4000	14		95	30	570	300	7	1	8	$1\frac{1}{4}$	1180000	
Greenwater	400	$4\frac{1}{2}$		20	15	165	50	2		1		320000	
Fort Frances													
Caliper Lake	330	$2\frac{1}{2}$		45	5	87	60	1	1	1	$\frac{1}{2}$	4400	900
Quetico	805	4		69	5	175	400	2	1	1		111200	
Lake of the Woods	1500	$6\frac{1}{2}$		86	6	165	200	4					
Geraldton													
Klotz Lake		1		26	1	34		2		1			
MacLeod	4240	2		54	5	104	324	5		3		5000	
Blacksand	1000	$3\frac{1}{2}$	1	54	6	66	50	4		1			
Rainbow Falls	400	$1\frac{1}{2}$		100	4	112	20	3		2			
Gogama													
Ivanhoe	5280	1		35	50	20	100	5				250	
Hespeler													
Graigleith	3100	2	3	170	12	352	175		4		$5\frac{1}{2}$	600	4
Sauble Falls		3		160	10	325	200		3	1	$3\frac{3}{4}$	575	
Inverhuron	2000	7	4	320	25	700	1000	5	5	1	$2\frac{1}{2}$	13875	

TABLE NO. 8b (cont'd)

PROVINCIAL PARK IMPROVEMENTS (GENERAL DEVELOPMENT)

AS OF MARCH 31, 1961

District and Park	Swimming Beaches (Feet)	Park Road (Miles)	Bridges	Camping Units	Picnic Area (Acres)	Picnic Tables	Parking Areas Car Capacity	Wells	Water Pressure Systems	Docks and Ramps	Hydro Lines (Miles)	Trees Planted	Canoe Routes (Miles)
Port Arthur													
Inwood	50	1		42	2	73	70	3		1			
Kakabeak Falls	1800	4	1	69	32	400	690		1		1/4	3200	
Middle Falls		1		30	6	156	300	2	1		1/4		
Shuniah	600			24	5	33	125	3		1			
Sibley	2000	42	2	300	25	375	1000	14		1		102700	
Pembroke													
Algonquin	3500	125	5	1250	6	1450	1200	30	4	9		1650	800
Driftwood	3000	3		75	2	105	100	6	1				
Carson Lake	300	1		45	1	50	20	3					
Sault Ste. Marie													
Pancake Bay	10800	4 1/2	9	152	8	275	144	6	1			4000	
Lake Superior	10800	5	4	176	27	175	130	6				1000	
Sioux Lookout													
Pakwash	3500					5		1					
Sudbury													
Fairbank	1100	2		132	12	261	200	6	1	1	1	37	
Windy Lake	5000	2 1/2	1	58	100	423	430	9	2	1	2	5000	
Swastika													
Kap-Kig-Iwan	900	2 1/2	1	64	30	387	300	5	2		1/4	81750	8
Esker Lakes		3 1/2	4	136	25	466	400	10	1	4		2000	
Tweed													
Black Lake	500	3		200	14	302	150	4	1	3	1/4	1500	
Lake St. Peter	1000	1 3/4	1	60	5	140	90	6	1	2	1/4	5800	
Lake on the Mountain													
Mazinaw		1/4		40	4	25	40		1		1/4		
Outlet Beach	10000	5 1/2		265	200 1/2	1137	2000	1				80000	
Sandbanks	12000	2	1		40	85	120	16	7	4	2	285000	
Bon Echo	1200	3 1/2		110	35	111	40	2			1/4	50	
White River													
White Lake	1000					125							
TOTALS	215661	471	54	11259	1584	27625	40141	462	146	108	48	4698937	1715

TABLE NO. 9

**PARKS MISCELLANEOUS REVENUE
YEAR ENDING MARCH 31, 1961**

District	Park	Vehicle Permits		Campsite Permits	Boat Permits	Hunting Permits	Misc.	Total
		Daily	Yearly					
Aylmer	Clay Creek	375.00	956.00	415.00				1,746.00
	Holiday Beach	4,198.00	6,784.00				3,639.61	14,621.61
	Ipperwash	3,233.50	10,640.00	20,246.25			3,026.18	37,145.93
	Long Point	332.00	3,820.00	10,337.00				14,489.00
	Pinery	4,731.50	17,966.00	23,801.00			620.00	47,118.50
	Rondeau	7,480.50	24,642.00	17,775.50		1,416.00	10,200.39	61,514.39
	St. Williams Turkey Point	462.00	392.00				800.00	854.00
Cochrane	Kettle Lakes	484.00	4,786.00	1,775.00			150.00	7,195.00
Fort Frances	Caliper Lake	466.00	1,246.00	2,336.00				4,048.00
	Lake of the Woods	237.50	734.00	115.00				1,086.50
	Quetico	132.00	4,000.00	2,363.00	7,770.00		3,765.00	18,030.00
Geraldton	Klotz Lake	35.50	256.00	1,163.50				1,455.00
	Blacksand	57.50	324.00	517.00				898.50
	MacLeod Lake	149.00	1,962.00	1,199.00				3,310.00
	Rainbow Falls	3.00	536.00	460.00				999.00
Gogama	Ivanhoe Lake	28.50	150.00	402.00				580.50
Hespeler	Craigleith	644.00	4,308.00	7,791.75			508.02	13,251.77
	Inverhuron	967.00	6,054.00	11,216.00				18,237.00
	Sauble Falls	1,023.00	5,536.00	7,627.00			846.88	15,032.88
Kapuskasing	Remi Lake	144.00	2,240.00	1,146.00			400.00	3,930.00
Kemptonville	Rideau River	2,572.00	8,398.00	6,108.00				17,078.00
	Silver Lake	887.50	4,718.00	7,675.00				13,280.50
	South Nation	1,818.00	2,602.00	1,617.00				6,037.00
Kenora	District Office		8.00					8.00
	Aaron	258.00	1,526.00	1,254.00				3,038.00
	Blue Lake	180.00	1,440.00	2,543.00				4,163.00
	Rushing River	1,509.50	2,670.00	5,127.00			15.20	9,321.70
	Sioux Narrows	458.00	1,076.00	2,948.00				4,482.00

Lindsay	Darlington	1,478.50	2,626.00	491.00	568.00	1,200.00	6,363.50
	Emily	1,171.50	6,718.00	5,328.00		1,050.00	14,267.50
	Presqu'ile	3,647.00	15,754.00	15,377.00	728.00	1,515.25	37,021.25
	Serpent Mounds	1,114.00	5,140.00	6,270.00			12,524.00
Maple	Bass Lake	1,413.50	8,198.00	9,533.00		1,360.73	20,505.23
	Devils Glen	647.00	2,786.00	1,266.00			4,699.00
	Earl Rowe	609.00	2,382.00	1,484.00			4,475.00
	Sibbald Point	6,890.00	21,200.00	21,077.00		6,820.70	55,987.70
	Six Mile Lake	518.00	3,208.00	4,288.00			8,014.00
	Springwater	4,304.50	9,926.00			2,146.97	16,377.47
North Bay	Antoine	256.50	1,070.00	1,748.00			3,074.50
	Finlayson Point	107.00	1,562.00	4,743.00		541.90	6,953.90
	Marten River	358.00	2,562.00	6,638.00		159.03	9,717.03
Parry Sound	Mikisew	205.50	1,252.00	3,736.00		7.12	5,200.62
	Grundy Lake	404.00	2,912.00	7,641.50			10,957.50
	Killbear Point	234.00	1,424.00	4,737.00			6,395.00
	Oastler Lake	958.50	3,986.00	8,405.00			13,349.50
	Sturgeon Bay	239.50	1,684.00	4,238.00			6,161.50
Pembroke	Algonquin	15,917.00	33,562.00	43,515.50		33,298.58	126,293.08
	Carson Lake	3.00	382.00	2,451.00		25.00	2,836.00
	Stonecliffe	380.50	1,418.00	3,011.00			4,834.50
Port Arthur	District Office		84.00				84.00
	Inwood	103.00	604.00	883.00			1,590.00
	Kakabeka Falls	4,429.50	8,774.00	1,983.00		1,011.65	16,198.15
	Middle Falls	796.00	2,606.00	1,187.00			4,589.00
	Shuniah	464.00	1,872.00	1,243.00		163.50	3,579.00
	Sibley	308.00	2,606.00	2,163.00			5,240.50
Sault Ste. Marie	Pancake Bay	265.50	1,398.00	2,952.00			4,615.50
	Lake Superior	193.50	848.00	1,535.00			2,576.50
Swastika	Esker Lakes	222.00	1,712.00	2,149.00			4,083.00
	Kap-Kig-Iwan	378.50	2,252.00	1,146.00			3,776.50
Sudbury	Fairbank	470.00	1,520.00	2,987.00		300.00	4,977.00
	Windy Lake	999.50	3,862.00	2,316.00			7,477.50
Tweed	Black Lake	323.00	2,736.00	4,437.00			7,496.00
	Lake St. Peter	116.50	1,300.00	2,993.00			4,409.50
	Mazinaw Lake	16.50	566.00	2,205.00			2,787.50
	Outlet Beach	2,878.50	14,938.00	7,365.50		2,022.89	27,204.89
Provincial Totals		85,687.00	297,200.00	331,480.50		75,594.60	800,444.10

TABLE NO. 10

SUMMARY OF ATTENDANCE FOR
INTERPRETIVE AND NATURALIST PROGRAMMES

(Year ending March 31, 1961)

<u>Algonquin Provincial Park</u>		<u>Attendance</u>
Museum Attendance (estimated)	139 days	176,550
Pioneer Logging Exhibit	87 days	26,564
Conducted Trips	59 trips	4,174
Nature Trail Registration	5 trails	40,334
Evening Programmes of Lectures	18 lectures	2,973
Outdoor Amphitheatre Programmes	36 programmes	12,570
Special Groups	27 groups	1,192
Total		264,357
<u>Rondeau Provincial Park</u>		
Museum Registration	83 days	26,290
Conducted Trips	57 trips	984
Evening Programmes of Lectures	9 lectures	995
Special Group Conducted Trips	18 trips	481
Special Group Lectures	14 lectures	404
Outdoor Film Presentations	9 presentations	2,383
Total		31,537
<u>Sibley Provincial Park</u>		
Museum Registration	64 days	9,270
Conducted Trips	16 trips	192
Nature Trail Registration (estimated)	2 trails	157
Evening Programmes of Lectures	6 lectures	438
Children's Camp Programmes	8 programmes	328
Special Groups	5 groups	115
Total		10,500
<u>Quetico Provincial Park</u>		
Museum Registration	75 days	8,084
Conducted Trips	18 trips	262
Nature Trail Registration	3 trails	1,021
Evening Programmes of Lectures	20 lectures	1,272
Total		10,639
<u>Serpent Mounds Provincial Park</u>		
Exhibit Registration		3,675
<u>Sibbald Point Provincial Park</u>		
Museum Registration	77 days	21,571
<u>Nancy Island</u>		
Museum Registration	66 days	9,998

TABLE NO. 10

(cont'd)

SUMMARY OF ATTENDANCE FOR
INTERPRETIVE AND NATURALIST PROGRAMMES

(Year ending March 31, 1961)

Presqu'ile Provincial Park

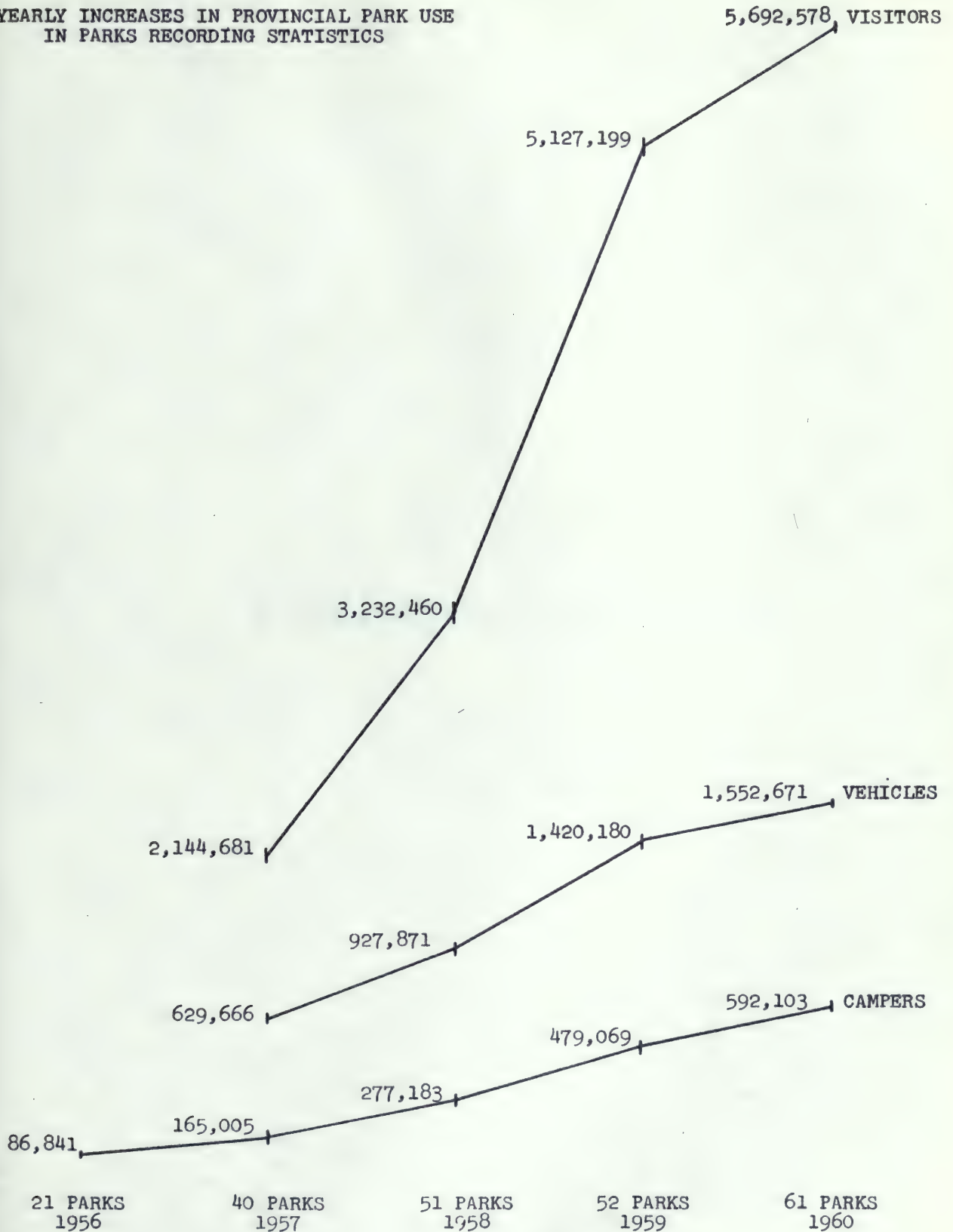
		<u>Attendance</u>
Museum Registration	77 days	16,127
Conducted Trips	30 trips	833
Nature Trail Registration	3 trails	2,571
Evening Programmes of Lectures	15 lectures	3,666
Children's Camp Programmes	2 programmes	140
Special Groups	3 groups	215
	Total	23,552

Remi Lake Provincial Park

Nature Trail Registration	1 trail	160
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TABLE NO. 11

YEARLY INCREASES IN PROVINCIAL PARK USE
IN PARKS RECORDING STATISTICS



PERSONNEL BRANCH



Junior Rangers at work on a new nursery site, ploughing ground and chopping out roots. Sault Ste. Marie District.

PERSONNEL BRANCH

GENERAL

With the reorganization of the Branch last year into six subsections, more emphasis this year was given to specialized personnel management and administrative programs including those of classification, establishment, including the continuation of the program of the appointment of long term casuals to the temporary and permanent staff, recruitment, job advertising, both internal and external, the administration of both overtime and grievance regulations, performance appraisals, the safety and first-aid training program and special training projects.

Following the appointment by the Ontario Government of the firm of Stevenson & Kellogg, Limited, management consultants, to study and make recommendations on a reclassification and salary program in the Civil Service, based on job evaluation, a number of personnel from various branches and districts were selected and loaned to this firm on a six to nine months basis. The job evaluation project is continuing at all job levels in the Department's organization.

DETAILS

Classification

Studies were continued on the forester, biologist, forest ranger and conservation officer class series. Involved in this work were the collection and sorting of position descriptions, the design of new class series for each classification, writing class specifications and recommending salary schedules.

The reclassification of the staff of the Research Branch continued. Because of the difficulties involved in assessing research personnel, outside experts were consulted. Following the initial preliminary work of collection and sorting of job description data, four meetings with consultant groups were held and 42 cases were considered. Following further discussions with the Civil Service Commission, 21 members of the Research Branch staff were reclassified to the new Research Scientist class series.

The studies on the proposed new class series, Fish Culturist, for hatchery personnel was continued and recommendations respecting the class along with salary schedules have been submitted to the Commission.

Recruitment

The recruitment program was continued and appointments were made to fill vacancies at various levels as they occurred throughout the year. These vacancies were the result of retirements, superannuations, resignations, promotions and transfers.

The professional staff was increased by the appointment of 10 new foresters and biologists in the spring of 1960.

As a result of the unemployment problem during the winter of 1960-61 there were increased applications and enquiries about job possibilities in the Department. In the Personnel Branch alone, during the period October 31, 1960 to March 31, 1961, there were over 700 employment interviews and over 950 letters of enquiry.

Establishment

The establishment quotas for the 22 districts and 2 of the branches were formally approved during the year. The study and analysis of the establishment for the remaining branches are still under consideration.

An establishment is the total number of year-round positions considered necessary for the operation of a district or branch at a desirable level of activity under current circumstances and, as such, is subject to continuous study, which is followed by an annual review and possible revision.

Complement

The complement of the Department as recognized and approved by the Treasury Department as of November 30, 1960, covering year-round temporary and permanent positions, was 1998. With the continuing program of appointment of long-term casual staff as civil servants, along with some new additions to staff, the Department's complement, by March 31, 1961, was 2565.

Transfers and Promotions

The program of transfer and promotion of the staff throughout the head office branches and districts was continued. This program has a two-fold purpose, to improve the effectiveness and efficiency of the Department and

to provide certain selected personnel with an opportunity to gain additional training and experience in different areas of the province and in new work assignments. In most cases involving the transfer of personnel, a promotion to a higher classification occurred.

Training and Development

On-the-Job Training - In addition to the on-the-job training which normally takes place, certain personnel were selected for special training courses - both in-service and outside courses. This training program included:

- 1) Short term outside courses such as university extension courses, orientation seminars and workshops with such organizations as the American Management Association, safety and first-aid courses.
- 2) Short term in-service courses included scaling courses, the special fish and wildlife course at the Ranger School, the executive development course and a familiarization meeting for new foresters and biologists.
- 3) Head Office Assignment Training Program: Selected personnel were brought into head office from the field offices for special assignments in the various branch projects during the winter of 1960-61. The purpose of this plan was to assist the branch concerned and to provide additional training and experience to the individuals concerned.

Educational Leave

The program of educational leave was continued. Each request was reviewed by the Committee on Educational Leave on the basis of the purpose and need for the training proposed as well as the value of such training to both the Department and the individual concerned. Seven employees were granted educational leave.

Three types of educational leave were considered, depending on the circumstances involved with each request:

- a) Leave with full pay,
- b) Leave with half pay,
- c) Leave without pay.

Most of the leaves granted were to professional personnel to return to

a university for specialized training which, in most cases, resulted in a higher academic degree.

Ranger School

The enrolment in the 1960 Ranger School course was increased to 80 students. In past years the number of students attending was limited to 60.

For the 1960 course there were 175 applications of which 92 were from Departmental personnel. The selection breakdown was:

Departmental personnel - - - - 46

Non-Departmental personnel - - 34

It is of interest to note that 8 Venezuelans attended this course. There was some difficulty with the language problem but this was worked out satisfactorily. There were also, among the non-Departmental candidates, 4 students who were sponsored by the Indian Affairs Branch, Federal Department of Citizenship and Immigration.

The School is now the main source for the recruitment of personnel to full time forest ranger and conservation officer positions and preference in filling such positions is given to graduates of this school or to those who have acquired an acceptable equivalent.

Grievances

A new grievance procedure was set up by Ontario Regulation 3/61 and was made effective in January 1961. This Regulation amended the earlier Regulation on Grievance Procedure which had been in force for approximately a year. The new Regulation provided employees with the right to present a grievance to their supervisors on three main issues - discharge, working conditions and terms of employment.

Solutions were found at all levels, from the initial informal discussion of the complaint to the formal Grievance Board or Classification Rating Committee finding.

Investigations of grievances were made assuring employees of the opportunity to explain and justify their position to other than their immediate supervisor. Subsequent action was then based on recommendation of the investigators.

As of December 1960 there had been 20 grievances from the total staff of

approximately 2500 personnel. This represents three-quarters of one percent of the staff.

Performance Appraisals

Appraisals of the job performance of employees continued with emphasis being placed on behaviour, knowledge and skills directly affecting the job with less interest being taken in characteristics which, whether desirable or not, have no direct effect on job performance.

The personal interview of the employee by the supervisor is being studied with a view to method improvement and the use of appraisals is being assessed.

Group Summary Appraisal of Job Performance

The introduction of the Group Summary Appraisal method proceeded and the findings to date are that such appraisals have value as a means of pointing out weaknesses in organization, supervision and understanding of job content, as well as assessing job performance.

Modifications of the method are being made so that the method may be adapted to the district organization. The modified procedure has been applied in one district with encouraging results.

Overtime

New government regulations on overtime were issued, effective January 1, 1961. Considerable difficulty was encountered in preparing a workable procedure respecting the administration of the new overtime regulations. This involved interpretation of administrative and non-administrative staff and a definition of the regular working period for both groups. Problems arose because of the nature of the Department organizational set-up and its decentralization structure. It was further complicated by different working conditions for different jobs in the various districts throughout the province.

Job Advertising

In-service advertising of vacancies in positions in nine classifications was operated satisfactorily with many employees applying for a total of 10 advertised positions.

An interesting characteristic of the method is the notification to all employees in the same classification or the next lower classification with the request that applications be made.

This removes any pre-selection of those who are eligible to apply and thus gives all employees in the classifications listed an opportunity to indicate interest.

Safety and First Aid

Following the taking of special safety training in Lateiner techniques in the latter part of 1959 by the three Safety Officers, classes in accident control for Supervisors were held in all districts.

These courses were very well received and it is felt that they produced good results.

A system of monthly man days and injury reports was set up and put into operation with all districts rendering reports each month which show the injury frequency rate for each district every month. From these reports comparison reports by regions and directorates were compiled and circulated quarterly.

Safety Council activity has been stepped up and meetings are held every month at which injury reports are reviewed and investigated and recommendations made. Safety Council members inspect various district headquarters, installations and work projects for possible safety hazards.

First Aid Classes were held in all districts as required and it is believed that almost 90% of district employees have now had first aid training.

Special safety meetings were organized and held for Parks personnel at which discussions of waterfront safety predominated.

Permission was obtained to have several member of the staff who have shown special interest in safety work attend the National Safety Council Congress at Chicago. Five persons attended this Congress in October 1960.

Three members of the staff have attended and successfully completed the Rescue Instructor's Course at the Department of National Defence College, Arnprior.

An advanced course in Lateiner Safety Training Techniques was held at the Royal York Hotel in Toronto in March, 1961. This course was attended and successfully completed by the Safety Officers.

As a result of the increased activity and interest in safety training of

all kinds, it is hoped that the favourable trend downward in the number of injuries reported over the last two years will be continued in 1961-1962.

Workmen's Compensation

The accident picture for the fiscal year 1960-61 shows some improvement. Although there was a slight increase in the number of men employed, the number of compensable injuries decreased. Compensable injuries reported to the Workmen's Compensation Board in 1960-61 numbered 649, a decrease of 38 from 1959-60 and costs were \$20,500.00 less than in the previous year.

The accident frequency dropped approximately 1%. Average cost per claim was \$106.70, a decrease of \$33.00 from last year. Lay-offs from work involved 42.4% of compensable claims and 57.6% required medical aid only. There were no deaths. The greatest accident improvement appeared in U.N.R. projects. Closer supervision and attention to safety produced marked results during the past year.

Tree planters and other short term workers have had less injuries and severity and costs have been lower.

There was a light fire season generally, except for two districts where 75% of all Extra Fire Fighter injuries occurred.

Junior Rangers, although employing fewer in number, had an increase in their accident rate of 3% over the previous summer. The axe was the cause of 32% of injuries among this group. The axe was the major single cause of all injuries. Falls of all kinds rated second but were the costliest.

Junior Forest Ranger Program

The Junior Forest Ranger program grows in popularity each year. There were 503 students appointed to 37 camps in 16 districts of the province. These camps were operated for eight weeks from July 4 to August 27. The cost to operate the program this year was \$231,952.90. This figure includes wages, travel, maintenance and provisions.

Because the program was designed for secondary school students in Grade 11 or higher, an effort was made to place applicants in Grades 12 and 13 first. All eligible students for whom positions were not available, mostly in Grade 11, were advised by letter to re-apply early next year.

PERSONNEL BRANCH

STAFF ATTENDANCE SUMMARY

The table below indicates the total number of employees on the staff for each month of the fiscal year

HEAD OFFICE

FIELD SERVICE

1960	Perm.	Temp.	Monthly Rated	Seasonal	H.O. Total	Perm.	Temp.	Monthly Rated	Seasonal	F.S. Total	Grand Total	Extra Fire Fighters
Apr.	538	40	-	61	639	1417	54	-	2071	3542	4181	--
May	531	39	-	62	632	1415	54	-	3111	4580	5212	1252
June	539	34	-	67	640	1416	50	-	3079	4545	5185	469
July	537	35	-	70	642	1418	49	-	2929	4396	5038	2907
Aug.	540	38	-	70	648	1416	48	-	3018	4482	5130	969
Sept.	537	35	-	68	640	1410	45	-	2772	4227	4867	845
Oct.	537	33	-	57	627	1401	48	-	2079	3528	4155	394
Nov.	539	38	-	59	636	1400	51	-	1347	2798	3434	5
Dec.	567	53	54	11	685	1452	59	365	931	2807	3492	-
<u>1961</u>												
Jan.	569	46	72	13	700	1450	60	372	1120	3002	3702	-
Feb.	573	39	51	16	679	1450	62	357	1205	3074	3753	-
Mar.	569	47	48	17	681	1527	74	272	1717	3590	4271	-
Aver.	548	40	56	48	654	1431	55	342	2115	3714	4368	978

COMPLEMENT

TOTAL STAFF as of MARCH 31, 1961

	<u>Perm.</u>	<u>Temp.</u>	<u>Monthly Rated</u>	<u>Seas- onal</u>	<u>Total</u>
Head Office	569	47	48	17	681
Field	1527	74	272	1717	3590
	2096	121	320	1734	4271

Total complement of year-round positions as of March 31, 1961 - 2565

Total permanent, temporary and monthly rated staff as of
March 31, 1961 -

2537

Total vacancies in complement as of March 31, 1961 -

28

2565

Number of professional employees:

<u>Foresters</u>	<u>Biologists</u>	<u>Civil Engineers</u>	<u>Miscellaneous</u>	
218	53	10	24	305

Number of Licensed Scalers on staff -

710

STAFF TURNOVER

The table shown below lists the number of employees who discontinued their services for various reasons, as indicated, during the fiscal year:

	Resigned	Dismissed	Died	Super-annuated	Retired	Transferred	Total
HEAD OFFICE	18	2	5	2	2	4	33
FIELD	31	-	6	18	5	-	60
TOTALS	49	2	11	20	7	4	93

NEW EMPLOYEES:

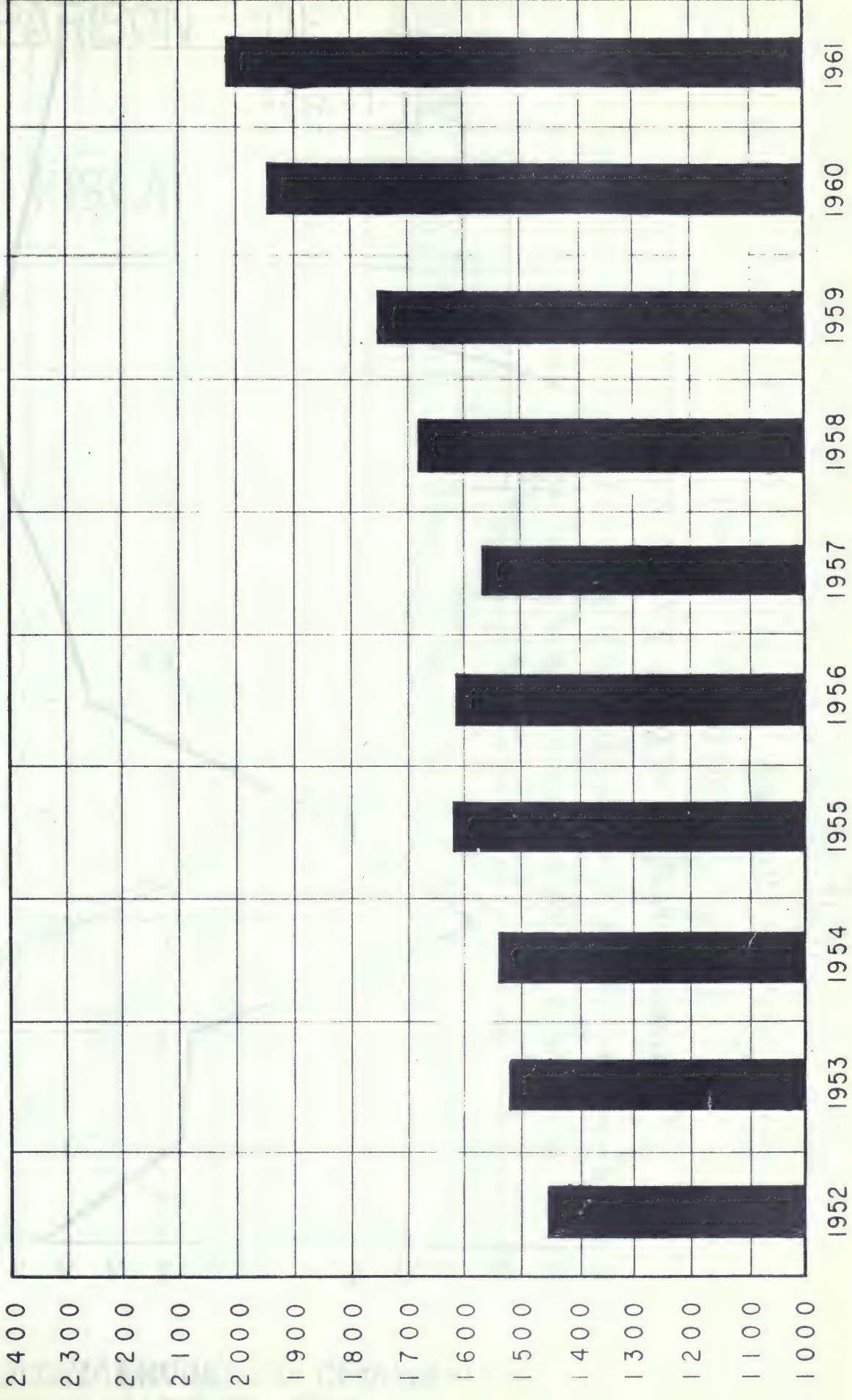
	<u>Male</u>	<u>Female</u>	<u>Total</u>
Head Office	67	33	100
Field	310	77	387
Totals	377	110	487

The Staff Turnover for the fiscal year is - 4.8%

Note: This is the ratio of separations to total permanent and temporary staff.

PERMANENT EMPLOYEES

AS OF MARCH 31st. EACH YEAR

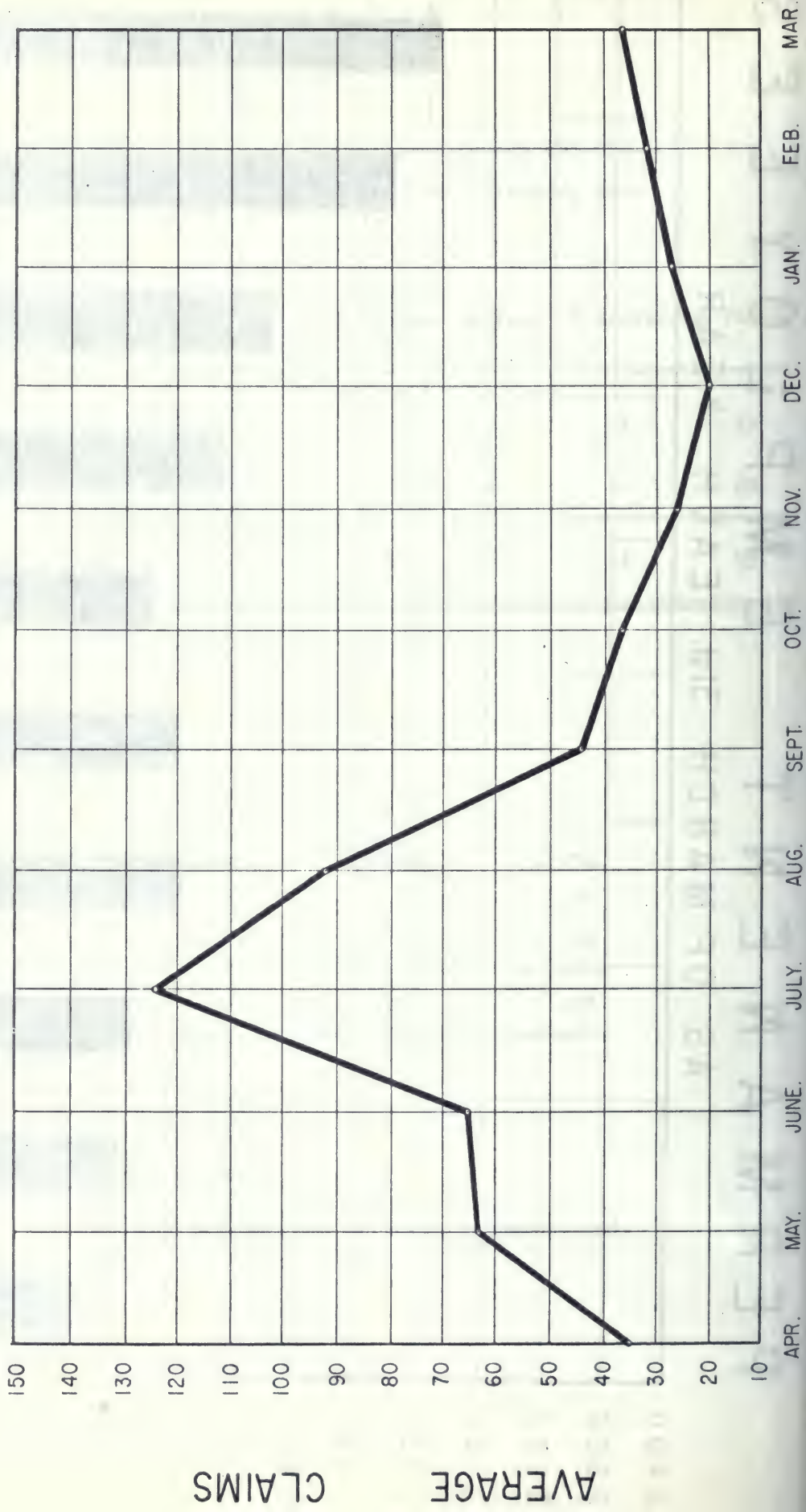


TREND IN WORKMEN'S COMPENSATION CLAIMS

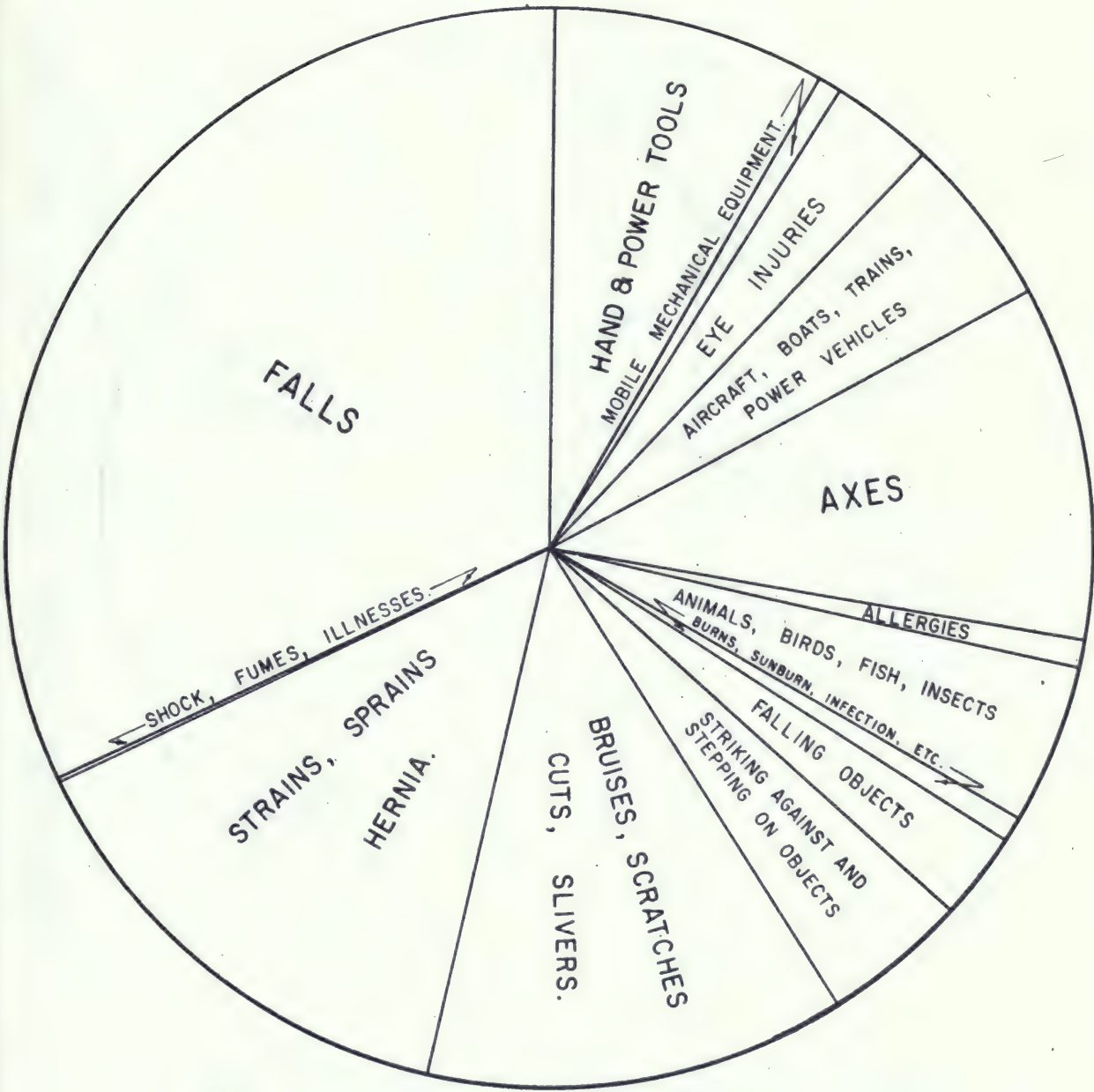
PREPARED FROM AVERAGE FIGURES FOR THE PAST TEN YEARS

1951-52 to 1960-61

AVERAGE NUMBER OF ACCIDENTS SHOWING INCIDENCE BY MONTH

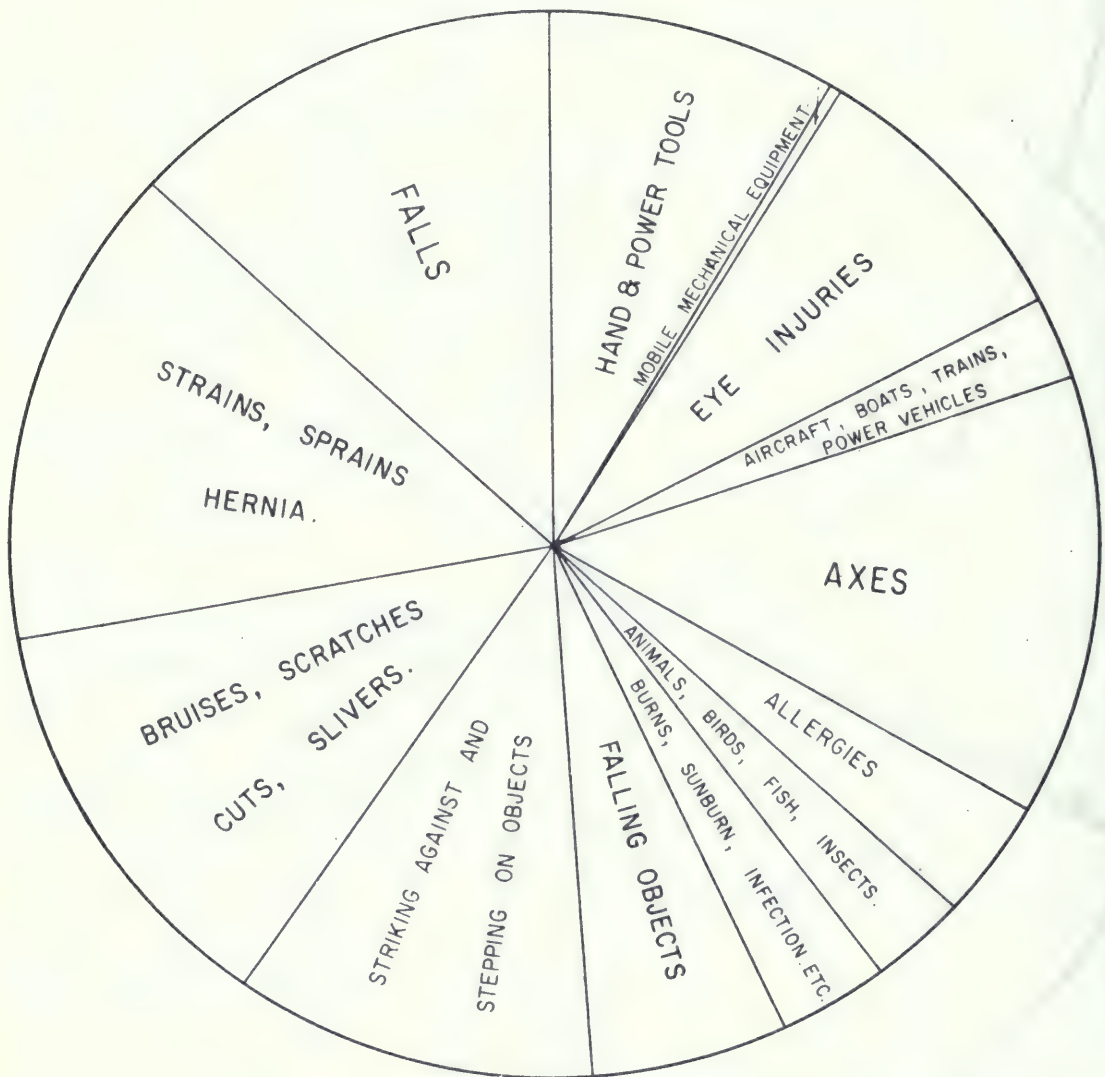


COMPARISON OF ACCIDENT COSTS
FOR THE
FISCAL YEAR 1960-61



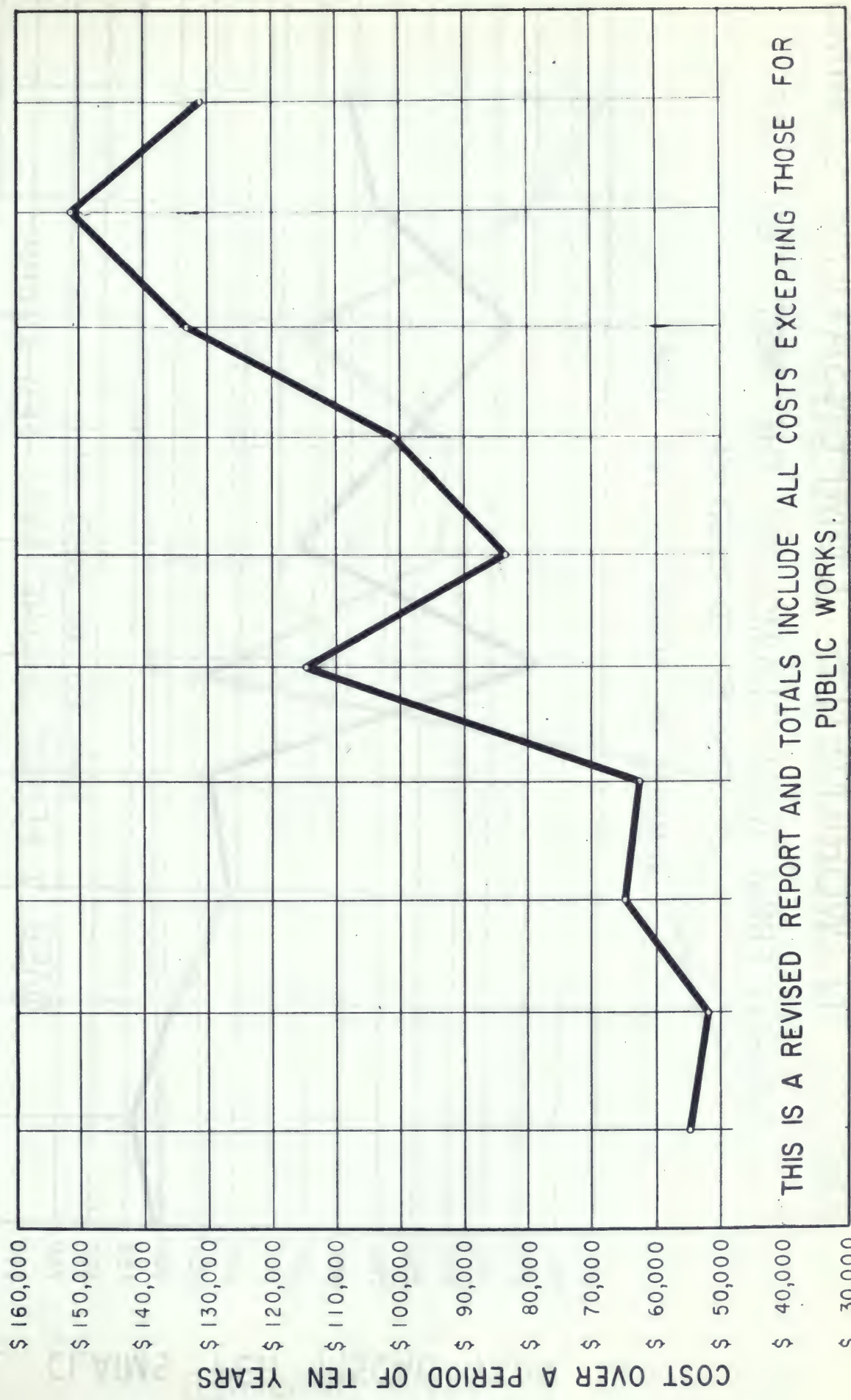
COMPENSATION AND MEDICAL AID PAYMENTS..... \$ 68,953.86
(EXCLUDING PUBLIC WORKS)

COMPARISON OF NUMBER OF COMPENSABLE ACCIDENTS FOR THE FISCAL YEAR 1960-61



NUMBER OF COMPENSABLE ACCIDENTS..... 649
(EXCLUDING PUBLIC WORKS)

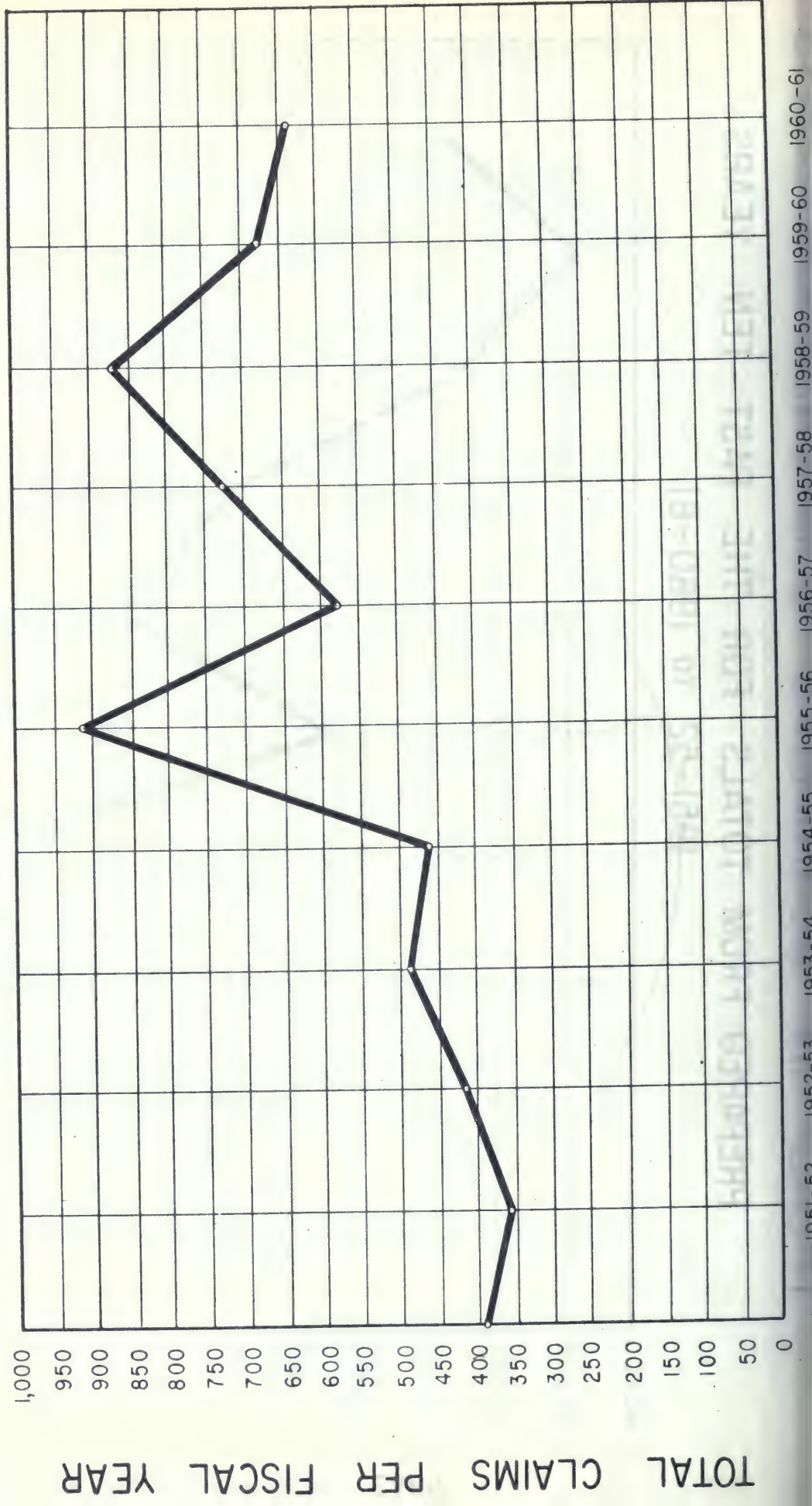
PREPARED FROM TOTALS FOR THE PAST TEN YEARS
1951-52 to 1960-61



TREND IN WORKMEN'S COMPENSATION CLAIMS

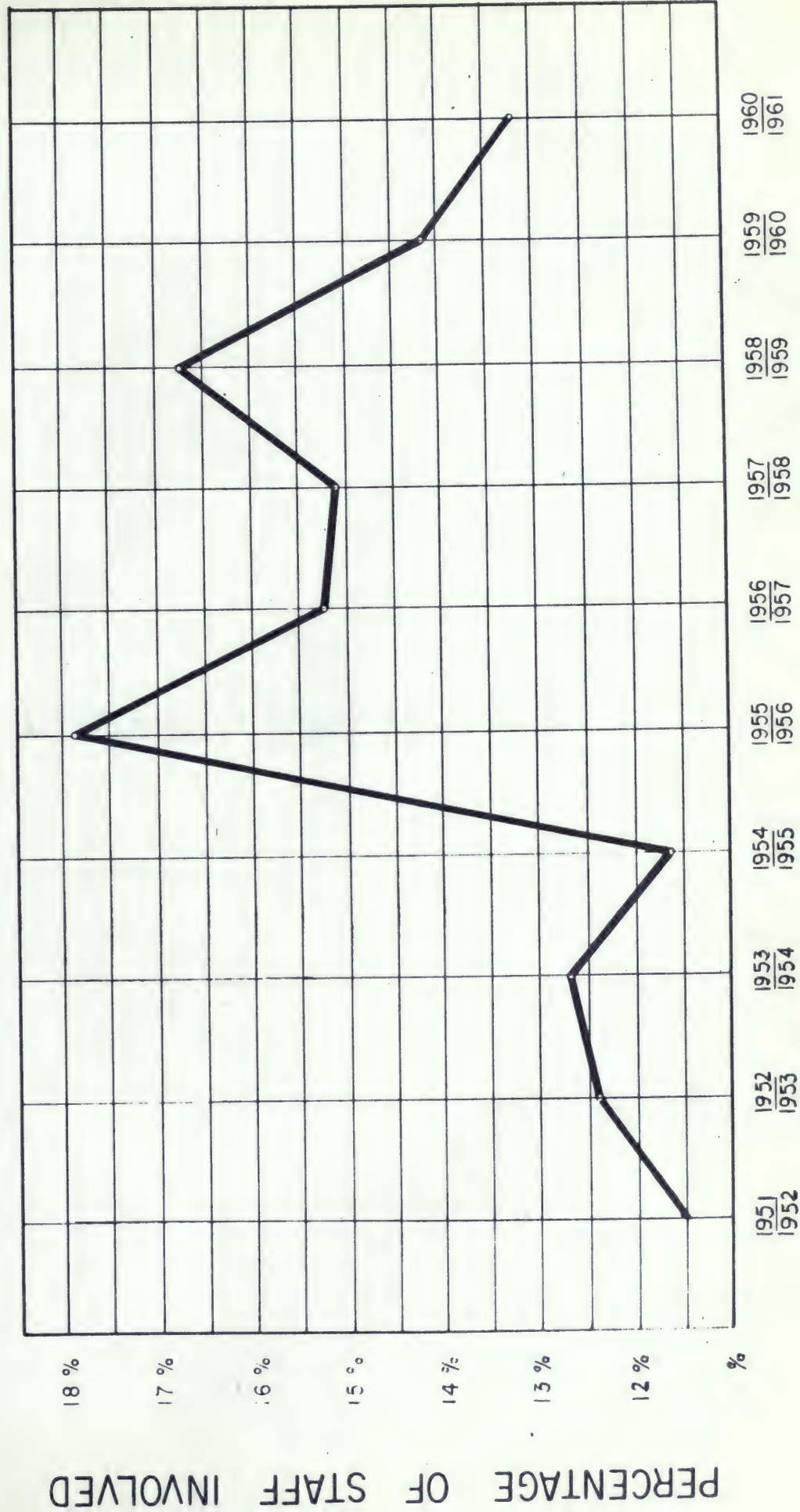
PREPARED FROM TOTAL CLAIMS FOR THE PAST TEN YEARS
1951-52 TO 1960-61

NUMBER OF ACCIDENTS PER YEAR



PERCENTAGE OF STAFF INVOLVED IN COMPENSABLE ACCIDENTS ANNUALLY

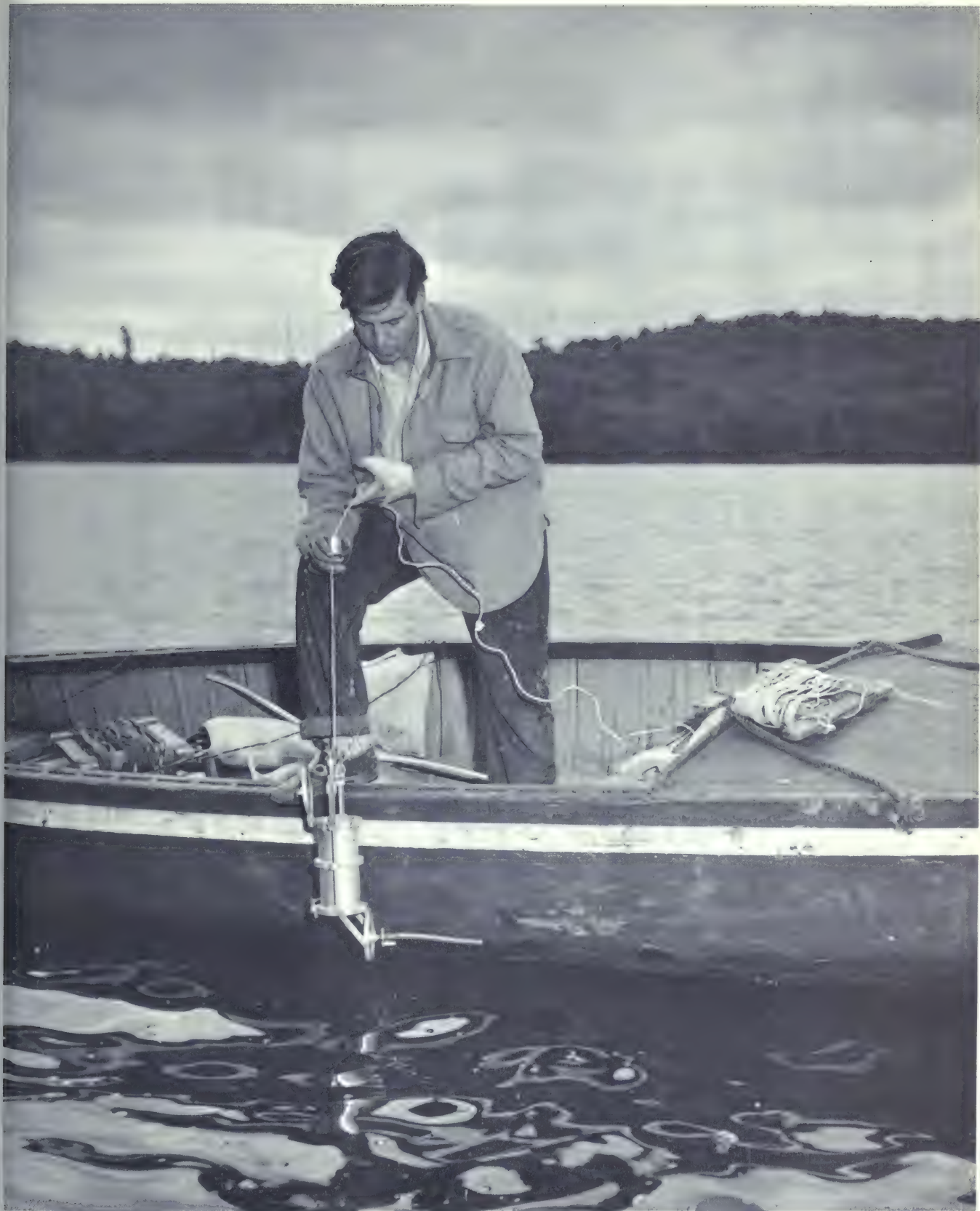
OVER A PERIOD OF THE PAST TEN YEARS
1951-52 to 1960-61



RESEARCH BRANCH

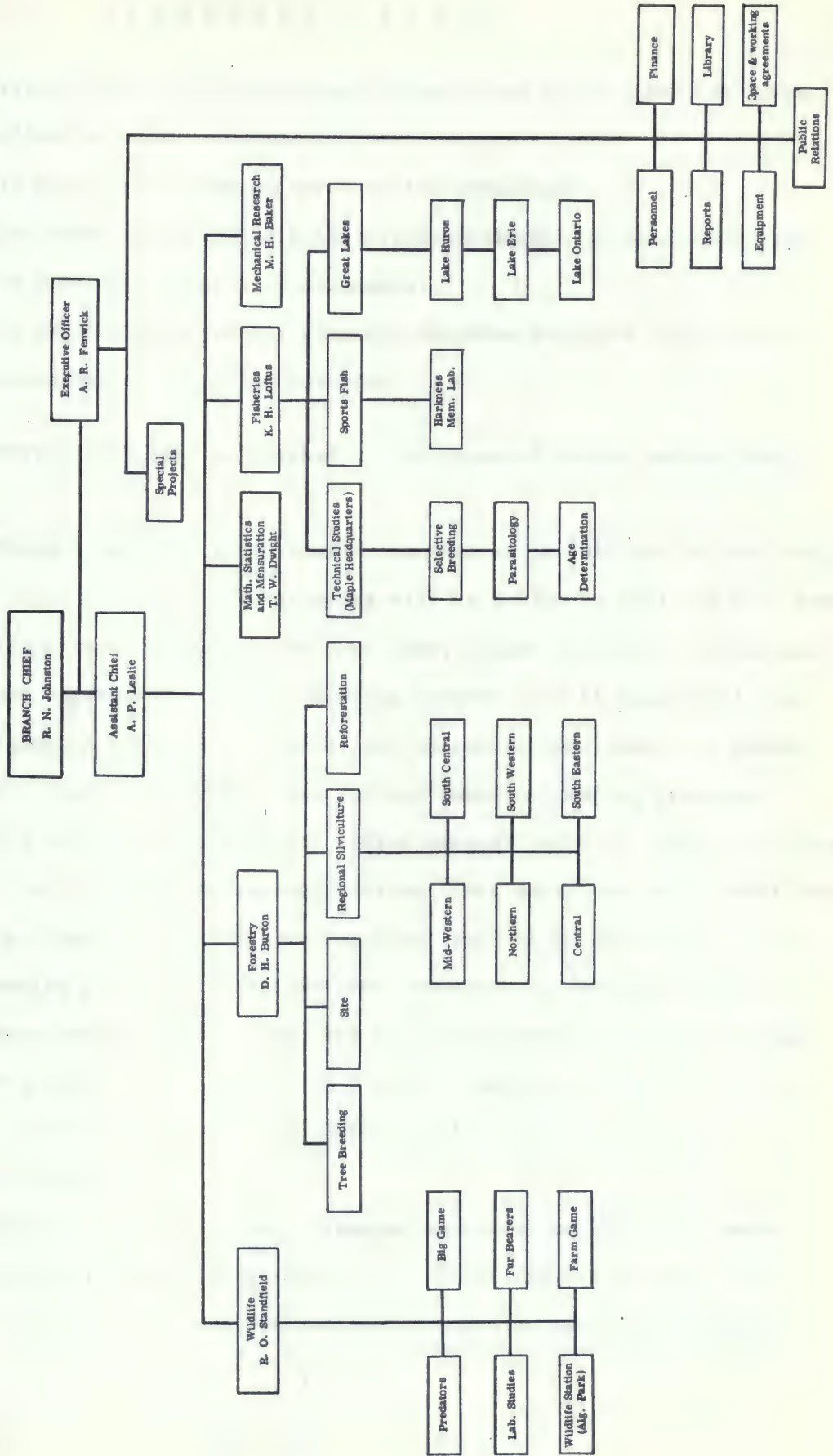


This successful graft of yellow birch is a basic step in the development of a high quality seed orchard to solve regeneration problems of this important species.



Sampling water of a northern lake to determine its productivity, a process common to research projects on smallmouth bass, speckled trout and lake trout.

R E S E A R C H B R A N C H



R E S E A R C H B R A N C H

The responsibilities of the Research Branch may be re-stated as being related to the following quotation from the "White Paper" of 1954:

- (1) To assess the research needs of the Department.
- (2) To secure co-operation with existing research agencies competent to meet departmental requirements.
- (3) To develop departmental research services in those fields where co-operation cannot be secured.

A summary of the work undertaken by the Research Branch during 1960-61 is set out below:

The WILDLIFE Section was partially reorganized in 1960 due to the resignations of three staff members. The vacancies will be filled in 1961 and will have the effect of putting greater emphasis on farm game, animal diseases, caribou and moose. A five-year experimental beaver trapping program in a 45 square mile research area in Algonquin Park was concluded, and indicated that under the favourable conditions for beaver in southern and central Ontario trapping pressures should have little effect on populations. After several years of study on success of deer hunters it is becoming increasingly evident that adverse weather conditions and the maturing of forests are much more important factors in the decline of deer herds than are hunting pressures and predation. Research to develop realistic wolf and coyote management techniques has led to experimental poisoning programs in parts of central and northern Ontario as a control measure. Statistics show that in 35 years the bounty system has produced no clear cut decline in the numbers of wolves or coyotes.

In FISHERIES research no major changes were made in the great lakes research program or facilities during the year. In the sport fisheries field, however, two new research units were established to work on speckled trout and

smallmouth black bass. Scientists hired to lead these units assessed the more important research requirements as ground work for a realistic program in 1961. Lake trout studies demonstrated that growth of this species, in some situations at least, can be improved by 40 per cent by providing ciscoes as food. The selective breeding (splake) project has demonstrated characteristics which allow us to select individual fish with high egg production potential and strong deep swimming ability, both fundamental to the success of the project.

The MECHANICAL Research Section established a forest fire equipment testing unit at the Southern Research Station in the summer of 1960. This unit tests the durability, economy and suitability of equipment newly introduced by manufacturers and recommends improvements.

FORESTRY research during the year was highlighted by developments in several fields.

In the Site research program some of the relationships between forest growth and forest environment were clarified, such as the relationship between the mineral composition of bedrock and the nutrient uptake of trees, and the nature and movement of soil water and its availability to the forest.

In Reforestation a series of fertilizer experiments covering methods of application, chemical content and quantities was initiated on an area where normal planting had failed and soil and foliar analyses indicated deficiencies.

Two features of the Regional Silvicultural Research program may be mentioned: (a) prescribed burning and (b) black spruce layering.

The tests of prescribed burning as a silvicultural tool has yielded promising leads. During the current year a second series of fires were carried out successfully in Algonquin Park and work of a similar nature was initiated in the hardwood stands of two other districts. The work to date indicates that this technique may be an economical way of preparing seed beds for pine, spruce and yellow birch. In addition, prescribed burning may provide a suitable method for the control of undesirable weed species.

An important study of black spruce layering was completed during the current year in the northern region. This work has established the fact that black spruce layerings originate from branches rather than from roots as had been previously believed. In addition, this study has indicated that mature stands of good quality spruce can develop from layerings as well as from seed.

White pine blister rust reconnaissance surveys were extended into the northern limits of white pine commercial distribution, to evaluate infection and damage as a contribution towards the expanding planting programs. The infection was found to be still slight in comparison with the south where in some localities damage is severe.

A project was started during the year to explore the possibilities of estimating volumes of standing timber in some forest cover types as an alternative to the present system of scaling of wood after it is cut.

A more detailed description is given in the following pages of the above-mentioned and other projects.

WILDLIFE RESEARCH

The objective of the wildlife research program is to provide information about birds and mammals that can be used to improve wildlife management policies and techniques.

The reorganization of the wildlife research program following the resignation of three staff members in 1960 is reported in the foreword.

As in past years, much of the work is concentrated at the Wildlife Research Station in Algonquin Park but there has been an increase in the volume and variety of work being done throughout the province. Wildlife research projects are now distributed throughout most of Ontario as shown in Figure 1.

During the year, the Wildlife Section was responsible for 75 research projects, some of which were carried out in co-operation with field staffs in Forest Districts, the Ontario Research Foundation, the Universities of Toronto and Western Ontario, and the Ontario Agricultural College.

Laboratory Studies Unit

This unit, which is responsible for the studies of diseases, parasites, reproduction and other work involving specialized laboratory techniques, was primarily concerned with the distribution, incidence and effects of kidney worm (Diactophyma renale) in mink. In the course of the study, approximately 1,000 carcasses of mustelids and carnivores from 14 Forest Districts, have been examined. Of 636 mink autopsied, 28 carcasses, all collected in the Parry Sound, North Bay and Lake Simcoe Forest Districts, possessed kidney worms. Flukes (Paragonimus sp.) were found in the lungs of 31 mink from the Lake Simcoe and Lake Huron Districts. The effects of these parasites on mink are not yet known.

Information was gathered concerning two species of roundworm (Filaroides sp.) which inhabit the respiratory tract of mink and wolves. Fifty-five per cent of 328 mink were infected and 13 per cent of 373 coyotes were infected.

DISTRIBUTION OF WILDLIFE RESEARCH PROJECTS IN ONTARIO IN 1960-61

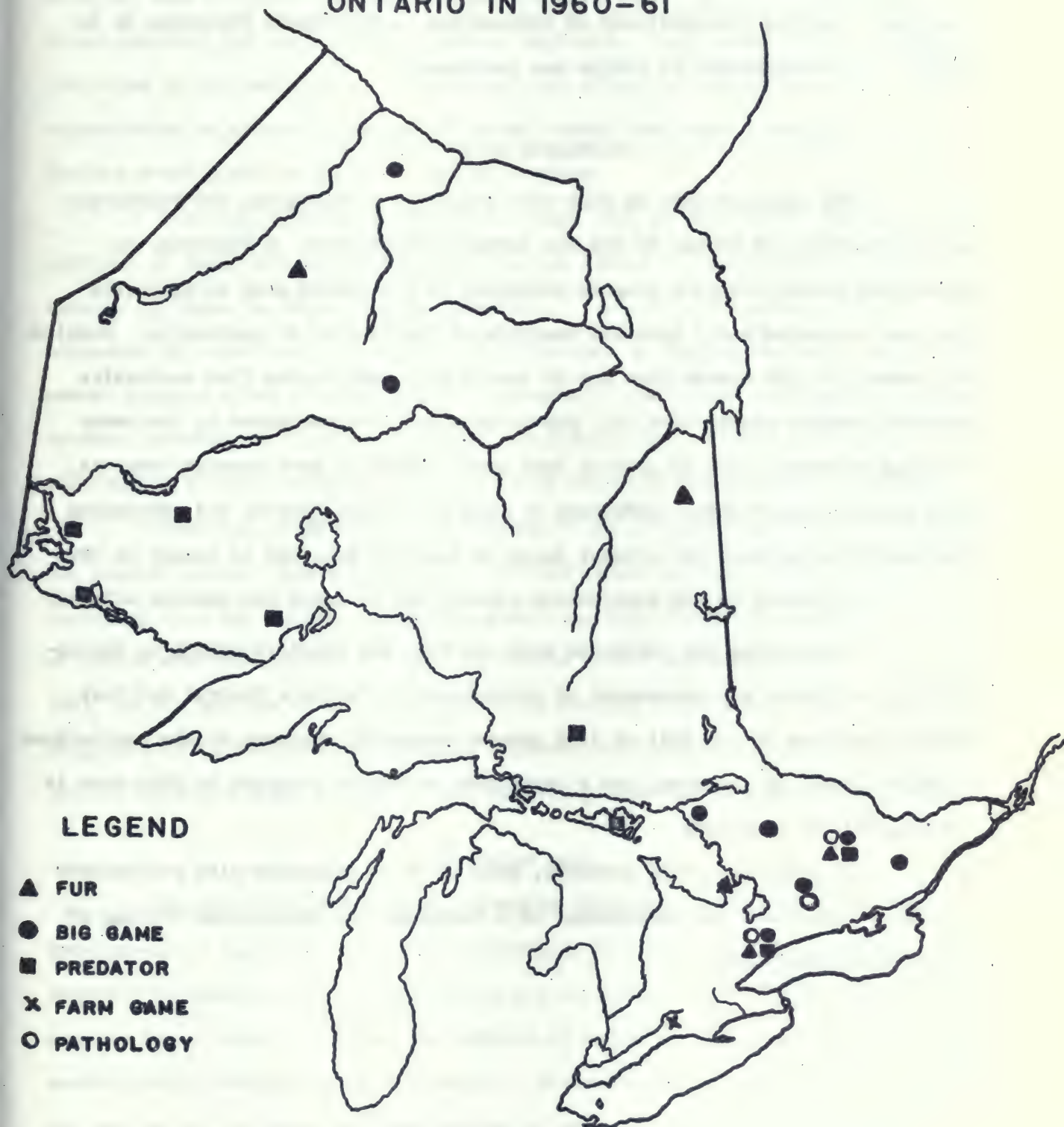


FIGURE 1

In addition, specimens of Guinea worms (Dracunculus insignis) were collected for future studies since this parasite occurs in several important species of wildlife. Also, as part of the responsibility of this unit, the diagnostic service and provision of information to the Forest Districts on incidence and distribution of rabies was continued.

Furbearer Unit

The research jobs in this unit continued to recognize the relatively great importance of beaver in the fur industry in Ontario. A five-year experimental beaver trapping program conducted in a research area in Algonquin Park was concluded and a detailed analysis of the results is continuing. Despite the removal of 739 beaver from the 45 square mile area during five successive winters, results showed that high populations were not decimated by the heavy trapping pressure which is greater than that imposed by most Ontario trappers. This indicates that under conditions of high population density and continuing favourable environment the present level of trapping pressure is likely to have little or no effect on the high beaver populations in south and central Ontario.

Cooperation was continued with the Fish and Wildlife Branch on the restocking of beaver and assessment of populations in Patricia Central and West. Research surveys in the fall of 1960 showed remarkable increase in the populations throughout most of the area, and a re-opening of beaver trapping in this area is anticipated for next year.

In addition, other projects, such as those concerned with preliminary studies of otter and the development of a technique for determining the age of beaver, were continued.

Big Game Unit

Reorganization within this unit has provided the opportunity to increase research work on moose and woodland caribou next year. Up to this time deer investigations had received the greatest emphasis. Deer research has been concentrated in two main fields: one studied the effects of deer browsing on the regeneration of valuable species of forest trees, the other investigated the factors which might be limiting hunting success.

The deer browsing studies have shown that in some areas where high populations of deer persist, browsing is a major factor in the failure of some species of trees to regenerate successfully. However, this damage can be minimized by relatively inexpensive modifications in logging methods. An experimental program aimed at combining deer management and timber management, in South Canonto Township in the Tweed District, is showing good results and may be the fore-runner of more extensive integration of wildlife and forestry management.

The factors affecting the success of deer hunters have been investigated for several years. Results show that adverse winter weather conditions and declining food and shelter conditions resulting from the maturing of some types of forest are undoubtedly of prime importance in the declines of deer herds. In fact, as our studies on predation and other factors which affect deer populations progress, it is becoming increasingly apparent that predation and hunting are often relatively minor factors in the overall prosperity of deer herds in Ontario.

Predator Unit

Research by this unit is primarily directed, at this time, to the development of realistic management techniques for wolves and coyotes. In addition to studies, noted above, which are integrated with the big game research program in an effort to assess the effects of wolves on deer and moose populations, several other investigations are active. These include the development of methods for estimating the size and distribution of wolf and coyote populations.

The most promising technique is the location of wolves by their answers to broadcasted recorded howls. Also, an analysis of bounty records from 1925 on is continuing and results show that there has been little significant change in the numbers of wolves and coyotes in Ontario. Although the kill of wolves and coyotes has varied considerably in some years because of economic depressions, wars, poor hunting weather or other unusual conditions, the fact remains that there has been no clear-cut decline in wolves or coyotes presented for bounty in more than 35 years.

Because of this and in order to provide effective control of wolves and coyotes only when and where needed, part of the wolf research program is concerned with other methods of killing predators, and at the present time, experimental poisoning programs are being conducted in several locations in central and northern Ontario.

Farm Game Unit

Research in this unit was almost halted because of staff resignations. This year the unit was reorganized and a research biologist will be hired to assume direction of the program in 1961-62. Considerable emphasis will be placed on research on rabbits, pheasants, grouse and other upland game that is associated with agricultural or semi-cleared land. The importance of these species as sources of recreation for great numbers of hunters in southern Ontario requires that in the future a considerable research effort will be made on improving methods for their management.

FISHERIES RESEARCH

The fisheries research program has been developed to obtain new information and techniques necessary to surmount the obstacles which currently stand in the way of sound fisheries management. Continued development of the program along practical lines requires that the close working relationship between management and research staffs be continued and constantly improved.

In March, 1961 the third annual meeting of Departmental research and management biologists was held at the Forest Ranger School, Dorset. These meetings serve several useful purposes. They provide a means of exchanging up-to-date information. They accomplish an understanding on the part of the research staff of management problems encountered, which leads to a proper orientation of research programs. They also serve to improve the understanding of the management staff of the problems encountered in research, with a resultant appreciation on their part of the long term advantage of pursuing research projects to whatever fundamental level is necessary to achieve broad applicability of results to waters all across the province.

No major changes were made in the Research Branch program on the Great Lakes during 1960, and there were no changes in the facilities or staff at the several stations. The important species under consideration were lake trout, whitefish, perch, smelt and splake.

In the increasingly important sports fish field which was served by one scientist only until recently, two new units were initiated in 1960: speckled trout and smallmouth bass. With the development of these units during the next few years, and with the establishment of additional units for other important species such as yellow pickerel, our program will achieve a level of effort more consistent with the value and needs of this resource.

Lake Superior

The major research effort on Lake Superior continues to be the responsibility of the Fisheries Research Board of Canada under the terms of the Federal-Provincial Agreement for Ontario Fisheries. Our staff continued to maintain close liaison with this program and to cooperate in the lake trout rehabilitation program and in the assessment of sea lamprey predation.

During 1960, the Great Lakes Fisheries Commission, on which this Department is represented, completed the first application of larvicide to lamprey producing Lake Superior streams. With this achievement, the task of assessing the effect of this experimental control in terms of: (a) reduced numbers of lampreys and (b) improved numbers of lake trout, becomes doubly important. Only results in these terms can provide the basis for extending control work to lakes Huron, Michigan and Ontario.

Lake Huron

The South Bay lake trout study was concluded with the passage of the last of the planted trout through the experimental fishery in 1960. The following general conclusions are drawn from the project:

At the level of sea lamprey predation prevailing in South Bay during the 1950 decade, a self-sustaining lake trout population could not be established by hatchery plantings. No females were able to survive to spawning age.

The planting of 79,000 yearlings over a six year period did not provide attractive angling for lake trout in South Bay.

The stock used for planting was from Lake Superior but did not differ markedly in growth rate or behaviour from the native lake trout present when the investigation began.

It appears feasible to re-establish a self-sustaining lake trout population by stocking if the sea lamprey population can be substantially reduced.

No stock was available to continue the year class series of hybrids in Georgian Bay during 1960. Both the 1958 and 1959 plantings of hybrids appeared in commercial gear during the year and continued to demonstrate good survival, growth and wide-ranging movements. Ripe males and females were taken on October 12 over former lake trout spawning beds and it is presumed that spawning occurred.

Routine commercial catch sampling in the North Channel, Georgian Bay and South Bay was continued but failed to detect the long awaited arrival of a strong whitefish year class. Such a strong, in fact record, year class appeared in the Southern Lake Huron fishery, and this was carefully followed throughout the season. Exploitation of this year class (1957) by commercial fishermen and presumably by sea lamprey was found to be extremely high. By fall good numbers of the 1958 year class were growing into the size range vulnerable to the fishing gear in numbers suggestive of another strong year class. The landings produced by these two year classes established a 50 year record harvest of whitefish for this area.

During 1960 fish management and research staffs in Ontario and elsewhere on the continent began to recognize the significance of the gill net mesh size selectivity studies conducted at this station, and many evidences of its application began to appear.

Hydrographic studies, creel census, and experimental fishing activities were continued.

Lake Erie

Routine commercial catch sampling is undertaken each year out of the major fishing ports to provide information of current value to management and industry and to provide the long term data series necessary for research. During 1960 our sampling system was modified considerably to take account of the new types of gear which have appeared in recent years, and which to date have not been assessed adequately.

At the request of our Department, the Canada Department of Fisheries is developing new trawling gear for the economical harvesting of smelt. It is the responsibility of our staff to assess the effectiveness of the new gear. Our staff spent considerable effort on this assessment during 1960, with particular attention to effectiveness in different smelt concentrations and possible adverse side effects on other species. It was found that when the trawl is fished in heavy smelt concentrations, its catches are highly successful and there is no danger to other species.

Little progress was made in the study of blue pickerel because 1960 again failed to produce a successful year class. Netting for spawning fish and dredging for eggs yielded no significant samples. This work will have to be abandoned, at least until a successful year class appears.

Preliminary studies of perch mortalities and growth showed that the gill net mesh sizes currently in use were too large to efficiently capture the perch present in the lake.

Lake Ontario

A much needed research vessel, of proper size and fittings, was acquired for the Lake Ontario research unit. The first job on which this vessel was used was a three week cruise in the vicinity of Main Duck Island in search of mature lake trout that might have resulted from the co-operative Ontario - New York State lake trout stocking program. Although it was disappointing to find none, there was satisfaction that a thorough search had been made.

The girth-length relationship of whitefish from Lake Ontario was found to be the same as that for South Bay whitefish, so the gillnet selection curve derived at South Bay was applied to observations of the Lake Ontario commercial catch. It was apparent that there have been some substantial changes in the fishery during the past few years and that at present the gear used is not particularly efficient for catching the available whitefish. Recommendations have been made to the Fish and Wildlife Branch.

Stocking was done in some areas with lake trout which had been hatchery-reared, and it was found that the commercial catch of this species was almost entirely from this stocking. Some fishing effort was actually directed to catching the planted fish, and the purpose of the stocking program may be defeated as the trout had not reached reproductive maturity. Some method of curtailing this exploitation may have to be found if this trend continues.

Studies of yellow pickerel in the Bay of Quinte were again hampered by staff shortage. Work on eels, white perch and sea lamprey predation was continued.

Game Fish Studies

Plantings of hatchery-reared lake trout continued to yield very poor returns to the angler in Opeongo and other Algonquin Park lakes. This has led to an intensification of experimental work designed to understand why plantings here fail while those in some other areas, such as South Bay, are successful. The role of hard versus soft water rearing is being assessed in this regard.

Further attention is being given to the differences between plankton feeding as opposed to fish-feeding lake trout. It appears that the plankton feeders, although smaller in size, are able to maintain catchable populations more consistently than the fish-feeding trout.

The long term study of the food habits of lake trout in Opeongo has shown that with the decline of perch and the successful introduction of cisco, and with the consequent change of diet by lake trout, the average trout size has increased almost 40 per cent.

The final assessment of the effect of alternate year closure on lake trout year class strength has shown no measurable benefit. A new closure regime designed to produce strong year classes is being considered.

Smallmouth bass studies received full time attention from one scientist during 1960 for the first time. This allowed analysis of the Opeongo bass census data which indicated a decrease in the average size of bass taken by anglers since the size limit was removed, and an increase in the total catch.

Studies continued on the success of nesting, hatching and on survival and growth of bass fingerlings. These studies are progressing well towards an understanding of the mechanism which produces strong bass year classes in particularly warm summers.

The speckled trout research unit was re-established in the fall of 1960 and the remainder of the year was spent in an assessment of the needs of management and of the information available in the literature. A realistic research program for this species has been developed and will be initiated in the spring of 1961.

Selective Breeding (Splake)

Some of the experimental planting work concerning splake was reported in previous pages under Lake Huron. Other studies of introduced populations were made in Algonquin Park where the most spectacular observation occurred in Jack Lake, where splake spawned successfully in the fall of 1959 and the young swam away from the beds in the spring of 1960.

In the mass selection work at the Maple Laboratory, second generation hybrids and speckled trout back-crosses are being reduced, by two selection stages, to the 10 per cent that are best able to retain swim-bladder gas. Four year classes of speckled trout back crosses, and three year classes of F_2 hybrids, are now on hand. Selections are not yet possible on the latest year class, and are not yet complete on some of the earlier year classes. The project is being seriously limited through lack of working space and facilities, which has the effect of curtailing progress at the very time when success is most urgently needed. Splake are scheduled for introduction to Great Lakes waters as an alternative to lake trout if sea lamprey control is unsuccessful.

In that phase of the project in which branded individuals are mated and their progeny reared in individual family groups, there have been some significant results. Some of these matings have produced a higher proportion of progeny with the ability to retain gas than other matings. Similarly some matings produced progeny with a much higher viability than others.

Headquarters

A small technical staff continued to provide services to the field stations of research and management in age determinations for fish samples. In addition an increased demand for parasite and disease information concerning hatchery and wild fish was met by one of the technicians with training in these fields. Translations from German and Russian were also produced for documents of special significance.

In addition to normal administrative functions the headquarters staff continued to participate in the sea lamprey control experiment on the Great Lakes in a scientific advisory capacity to the Great Lakes Fishery Commission.

MECHANICAL RESEARCH

The Mechanical Research Section develops, improves and tests equipment and instruments to meet the special needs of the Department in protection, utilization and management. The Section is called upon particularly to design and construct unique pieces of equipment to enable the Research Branch to carry out its numerous projects to the best advantage. Consulting and supplying of technical advice to the Department is another important function of the Section.

The Section operated through the year with a staff of one mechanical engineer, three engineer's assistants and one maintenance machinist.

Some of the more important projects undertaken are described briefly below:

The Section returned to a previous policy of accenting the research aspects of its work in contrast to ordinary servicing features which were tending to become overly prominent.

A forest fire equipment testing station was established at the Southern Research Station in the summer of 1960. The object is to make continuing checks on efficiency of equipment newly introduced by manufacturers - durability, economy and other aspects of suitability, and where desirable suggest improvements.

Commencing in the late winter of 1960, the design and construction of a mechanical fire-line builder was undertaken. There has long been a need for such a piece of equipment, but the many attempts both in Canada and the United States to produce one have met with little or no success.

Several major projects were carried out for other sections of the Research Branch. Among these was the construction and installation of two additional hybrid trout selection tanks for the Fisheries Section. The mechanical parts for a fisheries research data card processing machine were designed and constructed. A pack tractor, which had been previously produced by the Section, was converted for the use of the Forestry Section to improve the method of applying fertilizers to sample tree plots. Considerable marine work, having to do with modifications and power plant installations on the various research vessels of the Research Branch was carried out. In addition to this work, many other devices and pieces of equipment were developed to aid in research generally.

MATHEMATICAL STATISTICS and MENSURATION

A small group has been built up since 1944 for the development, investigation and analysis of statistical models and designs for research. In 1950 forest mensuration studies were started on volume tables and tree growth; discontinued in 1956, this work was resumed in 1959.

In addition to routine help to all sections in designing experiments and analyzing data, there were three developments worthy of special mention. One was the study of sinkage of pulpwood logs - a study being analyzed for the Minnesota and Ontario Paper Company. The second was the study of estimating as a substitute for scaling, and arising out of this the preparation of tables of height, diameter, age and volume for various species in two of the main forest regions. The data from these is used to calculate the volume of the stand in areas selected for comparison of estimating and scaling. Initial tests near Gogama

show encouraging results and this may finally lead to a displacement of the scaling method in favor of estimating.

F O R E S T R Y

In the following pages, research in forestry is reported under the headings of Site, Tree Breeding, Reforestation, Regional Forest Research, R.C.-17, and White Pine Blister Rust Reconnaissance Surveys. Regional Forest Research is reported under the headings of the silvicultural field research units established at Port Arthur, Cochrane, Sault Ste. Marie, Dorset, Maple, and Tweed.

The whole forest research program has the objective of discovering improved principles, practices and techniques for management.

S I T E R E S E A R C H

The site research program is centered around regional investigations. When this work began in 1944 the objectives stated in the directive may be summarized briefly as follows:

- (i) To provide land class maps on a scale which will give a general statement of land conditions in the district.
- (ii) To develop techniques of using aerial photographs for mapping land quality.
- (iii) To obtain data which will form the basis from which to determine a land-use policy in the district.

The aim of development of the research aspect of this program has been to devise methods of classifying, mapping and describing land in such a way that its potential for the management of the renewable natural resources may be utilized as fully as possible under the social and economic conditions existing in the region. The program is organized to include not only an integrated classification of landform and soil features of a region but to establish relationships

between the physiographic features and the distribution and growth of forest species, both in natural succession and under management practices. The physiographic classification has been found to provide, not only a basis for rating the capability of land for forestry, but a framework for the comparative rating of land potential for agricultural settlement and for the management of wildlife, fish and recreational lands.

During the past fiscal year the landtyping on aerial photographs have been completed on areas totalling 25,000 square miles in northern Ontario. This is mainly in the district around Atikokan and Savanne in north-western Ontario and around Pagwa and White River in north-eastern Ontario.

Assistance was given head office and district staff in the interpretation of landtype maps in terms of potential biological productivity (i.e. for wood production and fodder for wildlife). The application of landtypes in the administration of renewable natural resources is being demonstrated in the Parry Sound District. A map was prepared of north-western Ontario showing the potential of broad areas for white and red pine production. The use-capability of the sites of the Espanola Management Unit was discussed with the unit manager.

A section report dealing with "The Use of Landtype Maps in Land-use Planning" was prepared. Other assistance has also been given to the leader of the Land-use Planning Section of the Department.

Detailed laboratory, field and greenhouse experiments to support the regional site research outlined above is under way. A member of the site research group is completing postgraduate studies on the capability of soil materials to provide the required nutrients under various conditions.

Another member of the group was engaged in a study of soil moisture, mainly with regard to the movement of water in soils of different texture and its significance in forest growth. Physical and chemical tests are being made in the laboratory to define more accurately the characteristics of the landtypes mapped and described in the field.

The leader of the site group presented a paper at the Fifth World Forestry Congress entitled "The Classification of Forest Productivity Systems". At various formal and informal meetings he was able to present the advantages of the Ontario approach over those used in the United States and Europe.

TREE BREEDING

Since the inception of the tree breeding program in 1946 there have been two main projects: the selection and propagation of superior strains of white pine resistant to blister rust and weevil, and rapidly growing poplars of good form for southern Ontario. A sizeable program has developed since 1954 in the breeding of two needled pines. Smaller projects on chestnuts and white cedar have continued since 1955 and 1956 respectively.

White Pine

New materials included scions of Idaho white pine (Pinus monticola) showing high heritability of blister rust resistance, several P. cembra materials from Switzerland and a few plus trees of northern Ontario white pine (P. strobus). Hybridization was centered on interracial work with native white pine (P. strobus), using pollen from one tree at Pointe Platon, Quebec on grafts of the same origin at Maple. Pollen of a promising P. griffithii was received from Rochester and much of our own pollen was used to determine the breeding value of our own materials. An abundant crop of cones, containing hybrid seeds, was harvested. These include the first seeds of interracial hybridization. A fairly large seed collection from resistant trees in Germany yielded seedlings that, thus far, do not seem to be more resistant to blister rust than the average native white pine.

Propagation of white pine by juvenile cuttings was started; also an experiment in bench grafting of white pine in the greenhouse to obviate the use of potted stock. Irradiation of white pine seed, to induce mutations of possible value, was carried out at Chalk River, Ontario. Seeds from several plus trees at Petawawa have yielded seedlings for progeny tests.

Poplars

New materials were restricted to a few clones of Populus alba, P. tremula and P. canescens from Switzerland and Yugoslavia. Hybridization was centered on the production of second-generation hybrids between P. alba and aspens, using several first-generation hybrids in our collection. The fungus-causing die-back on aspen hybrids was as damaging to our materials as it was last year.

A large plantation was established in the spring and two smaller ones in the fall. A cross of our P. alba with a P. alba from Spain yielded some materials with better rooting ability from stem cuttings than either parent, indicating the action of complementary genes.

Hard Pines

The development of new types, resistant to European shoot moth and superior in form and growth rate, continued to be the objective. A collection of scions of red pine was received from its range limit in south-western Wisconsin. A new collection of scions from plus trees, was undertaken last fall and grafted early this year. Several new co-operative experiments, involving hard pines, and resistance to shoot moth, were started at St. Williams and Turkey Point. Much material for this purpose was received from Petawawa and set out at Turkey Point. A series of grafting experiments with red pine were started last fall. This species shows poor results in greenhouse winter grafting and needs further study.

White Cedar

The production of improved types of this species and of western red cedar, hardy in southern Ontario, is the aim. The deep snow of 1959-60 blanketed the western red cedar seedlings and prevented a good freezing test. Instead, the seedlings were heavily culled in the beds, in respect to size and possible winter damage. It was found that the hardy western red cedar, received previously from Rochester, are most probably hybrids with Thuja standishii from Japan, which may account for their hardiness.

Chestnut

The aim is the production of hardy dwarfs, resistant to blight and suitable as dwarfing stock in a breeding program with timber-type chestnuts. Seeds of Chinese chestnut, from Beltsville, Maryland produced plants of good growth and hardiness. Chinkapin seeds from Virginia again did not germinate. Seeds of European chestnut, obtained in Toronto, yielded seedlings that were not hardy.

REFORESTATION RESEARCH

This section of the Research Branch is active in the study of problems related to nursery production and planting operations. Experiments are being conducted in the nursery or planting areas on fertilizing of plantations and new plantings, frost damage of newly planted trees, comparisons of sizes and age-classes of planting stock, prevention of frost heaving in nurseries, adjusting soil acidity in nurseries, and site preparations for planting.

Forest Fertilization Studies

An experiment was established in 1960 to study methods and results of applying regulated quantities of fertilizers (as indicated by soil and foliar analyses) to an area at the time of planting. The area chosen was one in which failure of normal planting techniques had occurred. Other fertilization studies are being continued in which fertilizers have been applied to established plantations (30 feet in height, or more) where the possibility of growth stimulation has been considered. While some aspects of the work in this field already show promise advance will be slow because of new problems encountered in measuring, recording and processing the results.

Frost Damage After Planting

A study is being conducted to correlate the extent of the frost damage sustained by spring-planted white spruce to the physiological condition of the

trees and the severity and duration of the frost. This work is expected to indicate modifications of nursery operations, planting techniques, and times of planting which will circumvent the bulk of the damage from frost. A technique in which electrical resistance is used to measure the amount of the damage to plant tissue has been extended to assist in research work in this problem.

Size and Age-class of Planting Stock

The series of plantings, started in 1957, to compare the results of planting smaller and younger stock (less expensive to produce in the nurseries) with the accepted standard sizes and age-classes of each species was continued with a number of plantings in 1960. The results of this work will be studied in terms of the survival and growth over a several year period; no immediate general conclusions are expected.

REGIONAL FOREST RESEARCH

Mid-Western Region

During 1960, the silvicultural research was continued in the most important forest stands of north-western Ontario. A new trial of a modified cutting system was established in a mixed-wood cover type to favour the species white spruce.

The research co-ordination program was continued and the Annual Project Summary was published. This regional research office continued to co-operate in supplying forestry library services.

Natural Regeneration, Growth Studies and Silvicultural Treatments.

White Spruce. A cutting system incorporating ground disturbance and the leaving of seed trees was established to improve the white spruce regeneration conditions which normally follow mechanical logging in the mixed-wood cover type. With the active co-operation of the Marathon Corporation, studies were

initiated on five 10 acre areas, three of which had white spruce seed trees reserved from cutting along the borders of the rectangular areas. Cutting and mechanical tree length yarding which took place in July, 1960 supplied the ground disturbance.

On a similar cutting system study established in 1956, an interim examination was made on the growth and survival aspects of the resulting regeneration.

Trembling Aspen. Additional sampling was carried out on a project initiated in 1959 aimed at devising a visual classification system for determining the quality and the future potential of the large amounts of trembling aspen regeneration which occurs following mechanical logging.

Artificial Regeneration Studies.

Jack Pine. Final field examinations were made on the aerial seeding project and the controlled burning, mechanical scarification and brush scattering project established in 1957. Office compilations and the report are not complete.

Chemical Treatment of Underbrush.

A final examination was made on the detailed herbicide study initiated in 1957. The study involved two chemicals, twelve concentrations, and four application times on a variety of common underbrush species. A detailed analysis of the results is underway and it is anticipated that at least another year will be required before the analysis and the report can be completed.

Northern Region

The forest research in the black spruce association of north-eastern Ontario was continued and expanded during 1960-61. A detailed study of the rooting habits and layering of black spruce was completed, and in view of the importance of the findings, a final report was submitted to a Journal for publication.

In 1958, a project was initiated in Leitch Township to study the practicability of soil drainage and its beneficial effects upon tree growth. In 1960, a strip sixty feet wide and $1\frac{1}{2}$ miles long, was laid out in a poorly drained stand of black spruce. This strip was prepared for ditching, and peat samples were analysed for physical and chemical properties. During that year a total of 1600 feet was ditched with dynamite at a cost of 35 cents per foot. The resulting drainage channel was three to four feet deep and six to eight feet wide. Studies of tree growth will continue in this area for a number of years.

Within the research reserve in Leitch Township a series of experimental cuttings were continued and a total of 580 cords of pulpwood was removed. This work is being carried out with the view of developing cutting techniques that will ensure satisfactory regeneration and optimum tree growth.

The gathering of pertinent data to advance the experimental work in the Leitch reserve was continued. This included forest inventory, site information, vegetation and regeneration studies. Experimental plantings were carried out within the reserve and herbicides were applied for brush control. A few hundred seedlings from a select stand of Scotch pine at Nellie Lake were planted on a well drained soil and 30,000 black spruce were planted for study purposes.

A total of 8000 feet of road was constructed in the Leitch reserve to facilitate future experimental work in the northern portion of the research area, and the field camps were substantially improved.

Central Region

The work of this research unit consists both of field and laboratory studies of problems of tree nutrition related particularly to forest disturbance and regeneration. It includes studies of the ecology of red spruce, and work on smelter fume pollution in relation to forest soils and vegetation.

Tree Nutrition, Forest Disturbance and Regeneration.

Studies are under way on the effects of prescribed burning and scarification on nutrient release in the soil and the uptake of these nutrients and the growth of tree seedlings. Part of this work is being co-operatively studied by the Division of Forest Biology, Canada Department of Forestry, to ascertain the effects on the microbial population of the soil.

Red Spruce Ecology.

This tree has characteristics which may be useful in improving the productivity of derelict tolerant hardwood and mixed-wood stands. Studies designed to measure its productivity on different sites in pure and mixed stands across its range are being carried out. It is hoped to provide explanations of differences in spruce growth in terms of nutrient uptake from the soil. Work is also proceeding in the examination of different strains for the best ecological characteristics. A large scale experimental underplanting has been established which should provide information useful in silvicultural practice and of a fundamental nature on shade tolerance.

Smelter Fume Pollution.

In the vicinity of Sudbury, Cutler and Wawa, large areas of forest have been removed from forest productivity due to effects of smelter fumes. The research officer and a member of the Botany Department, University of Toronto, who was hired for the summer, have carried out studies at both Sudbury and Wawa on the fallout from the smelter fumes and the effects on forest soil, lake waters, aquatic and forest vegetation. Two papers have been published.

South-Central Region

Forestry research in the South-Central Region is aimed primarily at developing investigative methods to study quality and growth performance of tolerant hardwood species in relation to environment.

A tree grading system has been evolved and partly tested by stem analyses and a small-scale lumber recovery study.

A critical analysis of defects which are associated with the natural pruning of sapling and pole-sized sugar maple was carried out with the co-operation of the Forest Pathology Laboratory, Canada Department of Forestry, Maple, Ontario. This is part of an initial phase in a moderately intensive study to determine the developmental nature of decay, stain and other defects under various stand and site conditions.

Eight acres of a hardwood stand were fenced to exclude deer from a study area which underwent treatments to improve stand conditions and to regenerate yellow birch.

Further trials with tubed seedlings have indicated a need for an expansion of this study in connection with producing the planting stock. This work will include the use of tubes of various size and materials and also different growing media.

South-Western Region

Research studies in the South-Western Region were based on a program established several years ago. This consists of research on tree species (silvics), forest management, forest chemicals, mechanics, and soil conservation. Each section has one to several projects.

Tree species research is confined to hard maple, silver maple and to a lesser degree bur oak, basswood and white ash. In addition to studying the characteristics of these species, many woodlots were inspected for high quality phenotypes which should be of value for improving the timber quality of hardwood stands in southern Ontario. The selection of high quality trees was greatly aided by developing quality standard tables.

Forest management research was concerned with studies of the effects of:

- 1) Pruning young red pine at early stages (two years and over after planting).
- 2) Planting intervals of red pine at six, nine and twelve foot spacing, 11 years after planting.
- 3) Growth and survival of basswood planted in a hard maple stand which had been subjected to three degrees of thinning.

Forest chemical studies were expanded by an experiment on the use of 2, 4-D ester as an eradicator of hawthorn and wild apple. Detailed information was collected in co-operation with the South-Central Regional Unit on the release of white pine, red pine and white spruce from underbrush by the application of chemicals. Some of the information was analyzed on the degree of kill of the underbrush and on the growth of the conifers two years after treatment.

Mechanical research was devoted to the development of a special dendrometer tape for measuring seasonal growth of trees up to four inches. These are being tested on red pine at East Gwillimbury research area for recording the effects of cultural treatments.

Soil conservation research was confined to gully erosion studies at John Pearce Park. Here black locust planted along the gully one year previously were tallied. It was observed that the locusts were becoming established where there was not excessive slippage of the banks.

South-Eastern Region

Prescribed Burning.

The studies of prescribed burning and its use as a silvicultural method for the improvement of low grade hardwood stands were continued throughout 1960. A second series of burns was completed according to plan at Swan Lake, Algonquin Park, and the work was expanded to include two additional areas in the

Districts of Tweed and Lindsay. To emphasize the importance of this program, the co-ordination of all experimental burns was assigned to the regional research office at Tweed.

Yellow Birch Regeneration.

A fourth annual regeneration survey of an area experimentally treated to favour yellow birch was conducted this year. This survey confirmed the findings of the previous surveys as to the beneficial effects of the experimental treatments. These were:

Scarification improved the germination and survival of the yellow birch seedlings.

The heavier than normal operating cutting (a group selection method) improved the light conditions, thereby increasing height growth.

White Spruce.

In the Tweed District a silvicultural program to improve both forest and wildlife conditions was continued throughout 1960. Additional seed patches were created to take advantage of the good 1960 spruce seed crop. The object was to compare artificial and natural regeneration in spruce and cedar swamps where three degrees of cutting had been done the previous year.

White Pine.

A white pine stand was treated to three degrees of release from an overstory of poplar. This work was designed to study the beneficial effects of such a treatment for the control of white pine weevil. In 1960 the pine were examined for the third year but no significant results were apparent.

Blueberries.

A tally of blueberry plants in a sphagnum swamp indicated that mechanical pruning and controlled burning significantly increased blueberry production. Burning appeared to be the more effective.

Artificial Regeneration. (white pine, red pine, white spruce)

White pine, red pine and white spruce seedlings were planted in shallow till over granite to compare survival and growth with a similar planting in the fall of 1959. The initial tally in the fall of 1960 showed high survival of all species planted in 1959.

Nutrient Studies.

Studies have been conducted in the use of trace elements as a means of increasing the cell sap concentration to avert frost damage of seedlings. The application of one to three sprays of borax solution at three different periods has been studied, and records of growth and foliage conditions of the treated seedlings have been made during 1960 (white pine, red pine, white spruce, red oak, white ash). During the winter, studies were made of the damage to white spruce seedlings exposed to below freezing temperatures following one to three sprayings of borax solution.

WHITE PINE BLISTER RUST RECONNAISSANCE SURVEYS

Investigation of blister rust conditions in the white pine forests of the province was continued as a Departmental function, in co-operation with the Districts concerned. Surveys were extended for the first time into the northern limits of commercial distribution of the species, to evaluate infection and damage there, and as a contribution towards the expanding planting programs.

In the north, blister rust infection, in general, is still slight, apparently for historical and geographical reasons. Farther south, a wide range of forest damage is evident in different localities.

During 1960, detailed surveys, and in some cases re-examinations, of infected white pine stands were carried out in the Lake Erie, Tweed, Pembroke, Lake Simcoe, Parry Sound, Sault Ste. Marie, Gogama, Chapleau, Port Arthur and Fort Frances Districts. These investigations provided timely information on the

incidence and intensification of this introduced disease in important pine producing areas of the province.

R.C.- 17

A co-operative project on the regeneration of white spruce after logging, in the Heron Bay area.

This project, which was started in 1952, has been financed directly by the Research Council of Ontario, the Abitibi Power and Paper Company, and the Ontario Paper Company.

Research services have been furnished jointly by the Research Branch of the Ontario Department of Lands and Forests, forest research agencies of the Government of Canada, the Canadian Pulp and Paper Association, and the Faculty of Forestry of the University of Toronto.

Mr. Leslie M. Frost, Premier of Ontario, made public announcement of this project, and contributed a foreword to the initial report in 1959.

The project is due for completion in 1961, and a final report will be issued in 1962.

REPORTS

Research Branch Reports Published
during the year ending March 31, 1961.

Wildlife

Rabies and Wildlife. A. Fyvie. Research Section Report (Wildlife) No. 8, Supplement No. 11. December 1960. *

Growth and Survival of Multiflora Rose Hedges in Southern Ontario. C.D. Fowle and G.H. Temple. Research Section Report (Wildlife) No. 35. August 1960. *

Fisheries

A Modified Roller Press for Scale Impressions. M.H. Baker and H.H. Brohm. The Can. Fish Culturist No. 26, March 1960.

Further Observations on the Survival of Yearling Lake Trout Planted in South Bay, Lake Huron. J.C. Budd and F.E.J. Fry. The Can. Fish Culturist, No. 26, March, 1960.

Survival and Growth of Tagged Lake Trout in South Bay, Lake Huron. J.C. Budd. Trans. Am. Fish. Soc. Vol. 89 (3) 1960.

Variation in Vertebral Count in F₂ Hybrids of *Salvelinus fontinalis* x *S. namaycush*. W.J. Christie. The Can. Fish Culturist, No. 26, March 1960.

The Use of Lead Versenate to Place a Time Mark on Fish Scales. F.E.J. Fry, D. Cucin, J.C. Kennedy and A. Papson. Trans. Am. Fish. Soc. Vol. 89 (2), 1960.

Homing Behaviour in Spawning Lake Trout. N. V. Martin. The Can. Fish Culturist, No. 26, March 1960.

Selectivity of Gill Nets for Lake Whitefish, *Coregonus clupeaformis*. A. M. McCombie and F.E.J. Fry. Trans. Am. Fish Soc. Vol. 89 (2), 1960.

Some Relations Between Air Temperatures and the Surface Water Temperatures of Lakes. A. M. McCombie. Limnology and Oceanography Vol. 4, No. 3, July 1959.

The First Filling of the Swim Bladder in Salmonoids. J. S. Tait. Can. J. Zool. Vol. 38 (1960).

Recovery of Lake Trout Yearlings Planted in South Bay, Lake Huron between 1949-1955. J. C. Budd. Research Section Report (Fisheries) No. 36. *

Status of Fisheries Research Projects for the Year 1959. K. H. Loftus. Research Section Report (Fisheries) No. 33. *

* Reports distributed only to Department staff.

Annotated Bibliography of the Eastern Brook Trout x Lake Trout Hybrid. N. V. Martin. Research Information Paper (Fisheries) #7.

Summaries of Current Information on Round Whitefish and Mountain Whitefish. W. B. Scott. Research Information Paper (Fisheries) #8.

Summaries of Current Information on Shortjaw Cisco, Shortnose Cisco, and Blackfin Cisco. W. B. Scott. Research Information Paper (Fisheries) #9.

Summaries of Current Information on Kiyi, Bloater and Inconnu. W. B. Scott. Research Information Paper (Fisheries) #10.

Mechanical Research

Tests of Standard Wajax Mark I and Wajax Mark I Modified by Water-Cooling. M. H. Baker. Research Section Report (Mechanics) No. 41. *

Forestry

Forest Site Evaluation in Ontario. G. A. Hills and G. Pierpoint. Research Report (Forestry) No. 42, May 1960.

Review of "Principles of Plant Breeding" by R. W. Allard, 1960. C.C. Heimbürger. The Forestry Chronicle 37 (1): 67-68, March 1960.

A Field Test of Dunemann Stock. R. E. Mullin and R. H. Leech. Research Report (Reforestation) No. 41. December 1960.

Some effects of Smelter Pollution North East of Falconbridge, Ontario. Eville Gorham and Alan G. Gordon. Canadian Journal of Botany, Vol. 38, pp. 307-312. 1960.

The Influence of Smelter Fumes upon the Chemical composition of Lake Waters near Sudbury, Ontario and upon the Surrounding Vegetation. Eville Gorham and Alan G. Gordon. Canadian Journal of Botany. Vol. 38, No. 477, pp. 477-487, 1960.

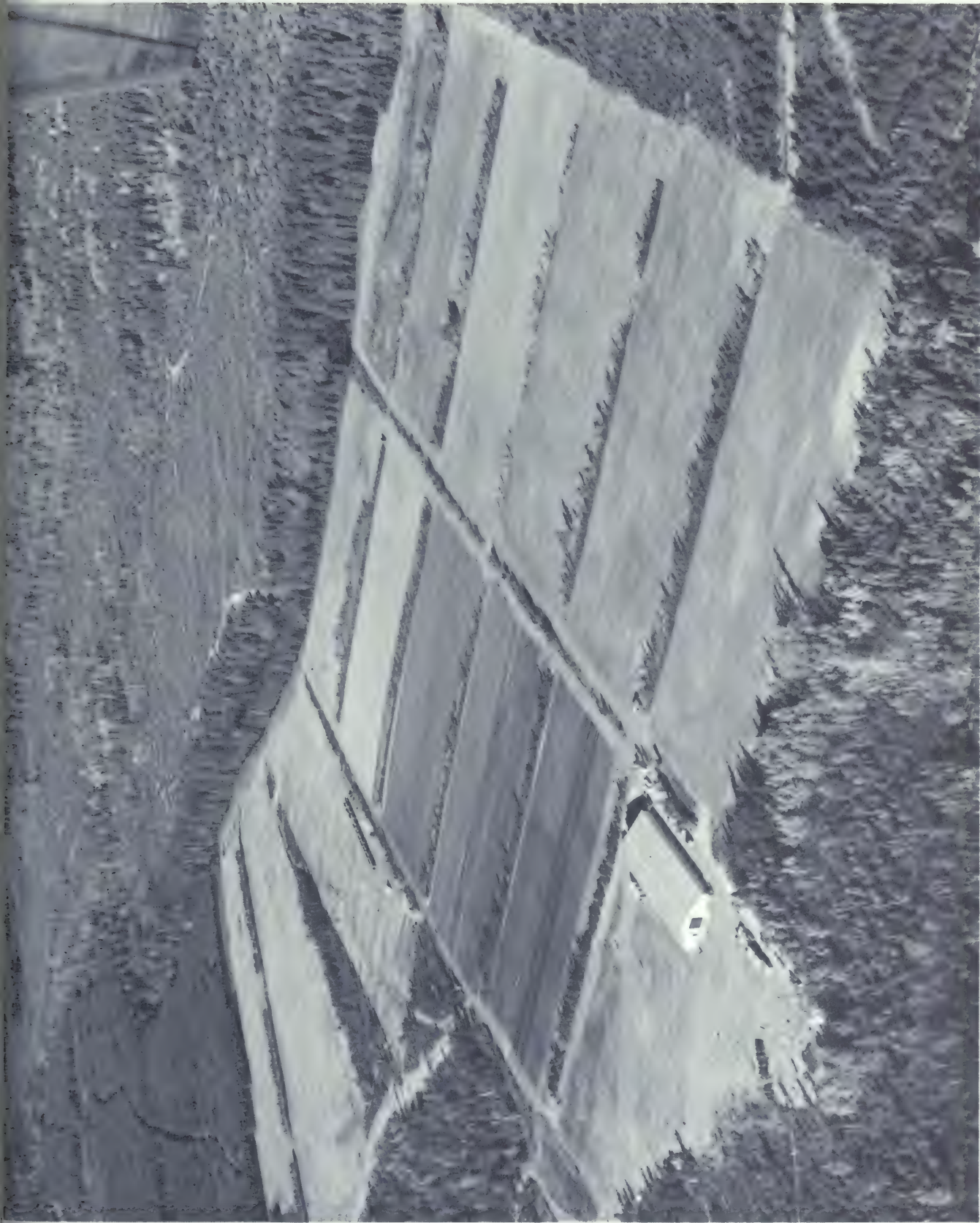
The Shaping of Pine Trees by Pruning and Shearing. H. C. Larsson. Research Report (Forestry) No. 43. June 1960.

The Shaping of Pine Trees by Pruning and Shearing. H. C. Larsson. American Christmas Tree Growers' Journal. March 1961.

Progress Report on Prescribed Burning in the Hard Maple-Yellow Birch Cover Type in Ontario, 1958-1959. J. Holowacz. Research Report (Forestry) No. 37, November 1960.

A Study of Blister Rust Development and Damage Accrual 1953-1963. Pine Lake - University of Toronto Forest. W. R. Haddow. Research Section Report (Forestry) No. 34. June 1960. *

TIMBER BRANCH



The forest tree nursery at Dryden, Kenora District, after three years of development. Three new compartments at the rear are being prepared for production.



Pine seedlings in area scarified the previous year.



A strip cut in spruce stand, Port Arthur District.



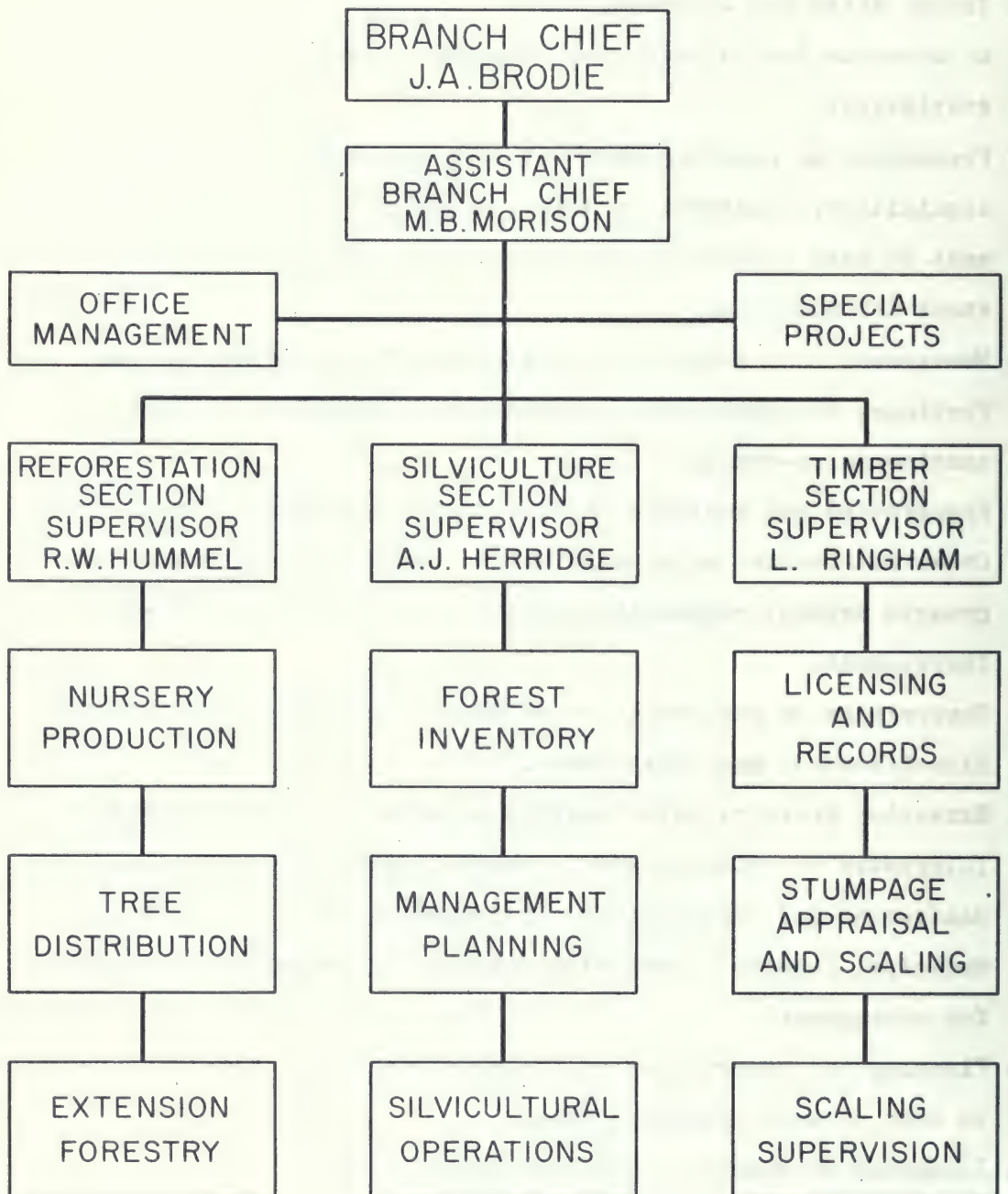
The logs in this boom near Pembroke will soon be used in the manufacture of paper.

TIMBER BRANCH

RESPONSIBILITIES OF TIMBER BRANCH

1. Timber sales and Licences, measuring of timber cut, preparation of accounts for collection of stumpage charges, compiling of statistics.
2. Production of planting stock at tree nurseries, this includes acquisition, treatment, storage, distributing seed, the establishment of seed production plots, and the distribution of nursery stock for planting.
3. Management on a sustained yield basis of the Forests of the Province, the preparation of the forest inventory and its continuous up-dating.
Preparation and analysis of operating and management plans covering Crown and Company management units. Directing cutting methods to promote natural regeneration and release cutting for stand improvement.
4. Supervision of reforestation on Crown land by tree planting and direct seeding and other means.
5. Extension Forestry which assists organizations and individuals interested in reforestation. Woodlot management and conservation.
6. Management and reforestation of demonstration forests, County and Municipal forests, Conservation Authority forests under agreement for management.
7. Planning and supervision of the construction of forest access roads to open up wood producing areas.
8. Licensing of sawmills, pulp and paper mills.
9. Registration and licensing of scalers.

TIMBER BRANCH



REFORESTATION SECTION

From nurseries operated through the Reforestation Section 49,833,412 units of nursery stock were furnished for all purposes during the year, an increase of 8,151,287 over the number furnished in any previous year.

31,564,608 trees were furnished for and planted on Crown lands during the year, an increase of 8,116,490 units over the number planted on such lands during the previous year.

4,065,785 trees were furnished for and planted on lands managed for counties, townships, and conservation authorities having agreements with the Minister under Section 2 of The Forestry Act.

13,708,050 trees were furnished for planting on private lands, a decrease of 101,075 units from the number furnished for this purpose during the previous year.

Tree seed was collected, processed, and sown and nursery operations continued to develop and maintain the output from nurseries at approximately 60 million units per annum in accordance with targets established.

The number of acres being managed for counties, townships, and conservation authorities under agreements entered into between the Minister and such corporations increased by 3,985 acres during the year to a total of 147,297.115 acres.

Summary of Dispositions
of
Nursery Stock
April 1, 1960 to March 31, 1961

Planted on lands vested in Her Majesty in right of Ontario.....	31,564,608
Planted on County, Township and Conservation Authority lands managed by the Minister.....	4,065,785
Furnished in respect of Private Lands.....	13,708,050
Furnished for Educational and Scientific Purposes.....	12,057
Miscellany: Departmental Exhibits, etc.....	227,912
Stored at Planting Sites.....	<u>255,000</u>
Total.....	<u>49,833,412</u>

Nursery Stock Dispositions
from
April 1, 1951 to March 31, 1961

<u>Year</u>	<u>Units</u>
1951-52	20,749,268
1952-53	24,241,754
1953-54	23,447,860
1954-55	25,519,383
1955-56	28,351,483
1956-57	31,081,112
1957-58	25,854,262
1958-59	33,414,110
1959-60	41,682,125
1960-61	49,833,412
Total	<u>304,174,769</u>

Trees furnished in respect of private land
April 1, 1960 to March 31, 1961

<u>County or Territorial District</u>	<u>Trees</u>
Algoma	281,950
Brant	140,425
Bruce	156,400
Carleton	145,125
Cochrane	54,550
Dufferin	877,600
Dundas	86,425
Durham	544,475
Elgin	220,425
Essex	56,325
Frontenac	138,200
Glengarry	78,900
Grenville	217,575
Grey	710,825
Haldimand	111,625
Haliburton	119,050
Halton	241,125
Hastings	433,125
Huron	276,025
Kenora	13,975
Kent	75,650
Lambton	134,175
Lanark	179,625
Leeds	123,050
Lennox & Addington	92,825
Lincoln	28,925
Manitoulin	50,375
Middlesex	301,125
Muskoka	288,150
Nipissing	91,175
Norfolk	317,125
Northumberland	255,550
Ontario	652,550
Oxford	119,625
Parry Sound	450,600
Peel	414,050
Perth	53,550
Peterborough	123,700
Prescott	747,025
Prince Edward	51,525
Rainy River	140,425
Renfrew	389,875
Russell	165,875
Simcoe	1,085,925
Stormont	115,225
Sudbury	169,700
Thunder Bay	271,075
Temiskaming	17,700
Victoria	129,800
Waterloo	176,975
Welland	134,175
Wellington	224,800
Wentworth	315,700
York	<u>916,300</u>
Total	13,708,050

Agreements under Section 2 of The Forestry Act
(as of March 31, 1961)

<u>Conservation Authorities:</u>	<u>Date of Agreement</u>	<u>Number of Acres</u>	
Ausable River	Dec. 13, 1951	3,119.00	
Big Creek Region	Dec. 2, 1954	1,991.00	
Ganaraska River	Jan. 31, 1947	7,511.00	
Grand Valley	Mar. 18, 1952	4,023.69	
Metropolitan Toronto and Region	Apr. 11, 1951	1,522.00	
Middle Maitland Valley	Apr. 1, 1955	466.00	
Moir River	Nov. 28, 1951	7,265.00	
Napanee Valley	Oct. 28, 1954	4,485.00	
Neebing Valley	May 15, 1958	1,030.70	
North Grey Region	June 25, 1958	2,206.00	
Otter Creek	Apr. 26, 1957	762.00	
Sauble Valley	Sept. 23, 1959	1,580.00	
Saugeen Valley	Dec. 15, 1952	8,448.00	
Upper Thames River	Apr. 11, 1951	<u>3,249.56</u>	47,658.95
<u>Counties:</u>			
Brant	Nov. 15, 1952	50.00	
Bruce	Jan. 20, 1950	14,656.35	
Dufferin	Nov. 26, 1930	2,042.00	
Grey	Dec. 21, 1937	7,183.08	
Halton	Mar. 14, 1950	1,245.63	
Huron	Nov. 27, 1950	1,339.00	
Kent	Dec. 23, 1953	76.975	
Lanark	July 5, 1940	2,561.00	
Leeds & Grenville	Apr. 24, 1940	5,625.50	
Lennox & Addington	Apr. 3, 1952	786.00	
Middlesex	Mar. 8, 1954	280.00	
Northumberland & Durham	Apr. 20, 1955	4,877.00	
Ontario	July 9, 1939	1,900.00	
Oxford	Sept. 1, 1950	716.56	
Prescott & Russell	Dec. 22, 1948	23,485.83	
Renfrew	Dec. 26, 1951	963.00	
Simcoe	Nov. 25, 1949	16,135.69	
Stormont, Dundas & Glengarry	Sept. 29, 1949	1,524.45	
Victoria	Aug. 10, 1928	7,044.00	
Waterloo	Apr. 17, 1950	710.48	
Wentworth	Nov. 27, 1952	889.30	
York	Sept. 25, 1952	<u>3,772.08</u>	97,863.925
<u>Townships:</u>			
Bonfield	Apr. 1, 1952	60.00	
Charlottenburgh	Apr. 1, 1955	175.00	
Cumberland	May 29, 1952	808.44	
Galway & Cavendish	Nov. 1, 1952	100.00	
Marlborough	Sept. 21, 1953	200.00	
Torbolton	Mar. 28, 1953	<u>430.80</u>	<u>1,774.24</u>
Total			147,297.115

SILVICULTURE SECTION

INVENTORY UNIT

Spartan Air Services Ltd. completed vertical aerial photography of 7,772 square miles in the districts of Sudbury and Swastika, which were not photographed in 1959 due to poor weather. A contract was awarded Capital Air Surveys Ltd. for vertical aerial photography of 12,700 square miles in the Parry Sound, Lindsay and Tweed districts. The contractor completed 12,533 square miles satisfactorily, and the remainder will be photographed in 1961.

Field work was completed on 12,970 square miles in the Tweed, Lindsay, Kemptville, Swastika and Sudbury districts. Six field parties cruised the Watabeag, Kirkland Lake, Larder Lake, Wanapitei, Onaping, Spanish River, Tyson Lake, Burwash, Trout Lake, Gooderham, York, Madawaska and Moira Crown management units and the Larose Agreement Forest.

Photo interpretation was completed for 5,700 square miles in Swastika, Sudbury, Lindsay, Tweed and Kemptville. Forest stand maps and forest ledgers were completed for 7,800 square miles. These covered the Crown management units of Timagami, Cobalt, Jocko, Mattawa, Nipissing, Kiosk, Whitney, Round Lake, and Muskrat in the North Bay and Pembroke districts and the Larose Agreement Forest in the Kemptville district. Work proceeded on revision of the planimetric base maps for those areas covered by the completed 1959 photography.

The multiplex plotter was used to prepare contour and form-line plans for the Parks Branch and the Department of Commerce and Development. Work was carried out for the Driftwood Park, Grand Lake Park, Butt Lake Park, and the Mountsberg and Valens Reservoirs.

The use of planimetric and forestry maps remained at a high level. The photo processing staff produced 41,707 contact prints, 1,881 photo mosaics at a scale of 1" = 1 mile, and 1,314 at a scale of 4" = 1 mile, 2,321 enlargements, 342 film diapositives, 44 multiplex plates, 259 Kelsh plates, 1,045 copy negatives, 73 cronaflex and developed 5 rolls of aerial film.

Silviculture Series, Bulletin No. 1, Inventory Maintenance Procedure for Ontario, published February 1960, was released for general distribution.

SILVICULTURAL OPERATIONS

This is the work of reproducing, tending, and improving the forest crop. It is described under two main phases:

- (A) Artificial Regeneration - by planting and seeding.
- (B) Stand Improvement - including procedures to obtain natural regeneration and tending the crop. Special demonstration areas of silvicultural techniques are included here.

ARTIFICIAL REGENERATION

The size of the Department's planting program during 1960-61 showed a substantial increase over the programs of previous years.

1958-59	20,190,338
1959-60	27,562,247
1960-61	35,630,393

Increasing numbers of trees are being planted on areas burned over during 1948 and 1955. The construction of roads and camps in these areas results in a high initial cost but since these improvements make substantial acreages of planting sites accessible the pro rated charges of these improvements will not add materially to the establishment costs. However, it is reasonable to expect that there will be release costs in the form of herbicidal sprays since in many cases the advance growth will provide competition for the planted stock.

Trees planted on Lands vested in Her Majesty in right of Ontario

Administrative District and Project

Trees

Aylmer District:

Bosanquet Township	60,400	
Charlotteville Township	25,000	
Harwich Township	500	
Malden Township	6,433	
South Walsingham Township	2,100	
Southwold Township	1,000	
Stamford Township	1,800	
Yarmouth Township	<u>400</u>	97,633
Area planted on licensed Crown land	- nil acres	
Area planted on unlicensed Crown land	- 130 "	

Chapleau District:

Calais Township	641,850	
Cavell Township	10,000	
Chapleau Township	122,200	
De Gaulle Township	9,600	
Edith Township	3,000	
Fawn Township	9,725	
Floranna Township	3,000	
Lloyd Township	495,225	
Mageau Township	3,000	
Margaret Township	50,000	
Nimitz Township	269,225	
Racine Township	759,900	
11B Township	291,300	
11C Township	707,000	
22 Township	<u>193,825</u>	3,568,850
Area planted on licensed Crown land	- 2,800 acres	
Area planted on unlicensed Crown land	- 1,661 "	

Cochrane District:

Adams Township	200,000	
Calder Township	98,000	
Fournier Township	100,000	
Keefer Township	605,000	
Kendrey Township	48	
Lamarche Township	2,200	
Leitch Township	25,000	
Marven Township	407,000	
Ottaway Township	150,000	
Sheraton Township	<u>490,000</u>	2,077,248
Area planted on licensed Crown land	- 1,072 acres	
Area planted on unlicensed Crown land	- 1,773 "	

Fort Frances District:

Dance Township	200,000	
Dewart Township	42,500	
Greisinger Township	21,000	
Richardson Township	70,600	
Rowe Township	88,000	
Tovell Township	201,000	
Unsurveyed - Keewatin Lake Area	163,000	
Unsurveyed - Northwest Bay Area	40,000	
Unsurveyed - Quetico Park Area	6,000	
Unsurveyed - Sapawe Unit	<u>160,900</u>	993,000
Area planted on licensed Crown land	- 1,546 acres	
Area planted on unlicensed Crown land	- 980 "	

Geraldton District:

Colter Township	25,000	
Kowkash Township	169,400	
Lindsley Township	25,000	
Meador Township	152,000	
O'Meara Township	428,000	
Pic Township	38,000	
78 Township	140,000	
Unsurveyed - Caramat Area	15,750	
Unsurveyed - Hillspport Area	97,300	
Unsurveyed - Limestone Lake Area	626,000	
Unsurveyed - Stevens Area	<u>100,000</u>	1,816,450

Area planted on licensed Crown land - 3,997 acres
Area planted on unlicensed Crown land - nil

Gogama District:

Beulah Township	146,000	
Burrows Township	762,725	
Cabot Township	1,453,675	
Garvey Township	3,000	
Kemp Township	<u>918,000</u>	3,283,400

Area planted on licensed Crown land - 2,215 acres
Area planted on unlicensed Crown land - 2,400 "

Hespeler District:

Amabel Township	150	
Puslinch Township	3,800	
Sullivan Township	<u>50,000</u>	53,950

Area planted on licensed Crown land - nil
Area planted on unlicensed Crown land - 50 acres

Kapuskasing District:

Casselman Township	38,304	
Fauquier Township	67,500	
Goldwin Township	85,525	
Larking Township	43,000	
McVicar Township	92,180	
Ritchie Township	24,575	
Rogers Township	140,200	
Sankey Township	10,000	
Shackleton Township	54,450	
Stoddart Township	6,500	
Studholme Township	400,500	
Wickstead Township	196,125	
238 Township	<u>149,900</u>	1,308,759

Area planted on licensed Crown land - 1,496 acres
Area planted on unlicensed Crown land - 819 "

Kemptville District:

Fitzroy Township	20,000	
Marlborough Township	101,067	
Montague Township	31,066	
Oxford Township	386	
Ontario St. Lawrence Development	<u>17,558</u>	170,077

Area planted on licensed Crown land - nil
Area planted on unlicensed Crown land - 200 acres

Kenora District:

Boys Township	20,000	
Bridges Township	10,000	
Breithaupt Township	65,000	
Britton Township	1,000	
Ewart Township	6,000	
Forgie Township	31,000	
Godson Township	50,000	
Lemay Township	12	
McGeorge Township	50,000	
Phillips Township	6,000	
Redditt Township	16,000	
Sanford Township	60,000	
Van Horne Township	60,000	
Tustin Township	20,000	
Willington Township	500	
Zealand Township	2,600	
Unsurveyed - Aulneau Peninsula	13,500	
Unsurveyed - Bigsby Island	35,000	
Unsurveyed - Dawson Island	14,000	
Unsurveyed - Gun Lake Area	9,000	
Unsurveyed - Hay Island	<u>49,000</u>	518,612
Area planted on licensed Crown land	- 509 acres	
Area planted on unlicensed Crown land	- 753 "	

Lindsay District:

Anstruther Township	159,200	
Belmont Township	30,000	
Brighton Township	20,000	
Bruton Township	106,000	
Burleigh Township	67,200	
Cavan Township	582	
Chandos Township	9,600	
Darlington Township	3,410	
Galway Township	49,000	
Hindon Township	500	
Methuen Township	900	
Ops Township	21,000	
Snowdon Township	342,500	
Stanhope Township	<u>19,500</u>	829,392
Area planted on licensed Crown land	- 729 acres	
Area planted on unlicensed Crown land	- 2,353 "	

Maple District:

Baxter Township	1,200	
East Gwillimbury Township	1,750	
Georgina Township	12,900	
Matchedash Township	453,000	
Orillia Township	750	
Tosorontio Township	2,416	
Vespra Township	28,365	
Vaughan Township	<u>3,782</u>	504,163
Area planted on licensed Crown land	- Nil acres	
Area planted on unlicensed Crown land	- 1,365 "	

North Bay District:

Bastedo Township	160,000	
Delhi Township	22,500	
Hendry Township	180,000	
Jocko Township	6,000	
Mattawan Township	200,900	
McAuslan Township	454,000	
Seagram Township	22,500	
Sisk Township	1,770	
Springer Township	2,000	
Widdifield Township	<u>2,024</u>	1,051,694

Area planted on licensed Crown land - 928 acres
Area planted on unlicensed Crown land - 1,236 "

Parry Sound District:

Ballantyne Township	695,000	
Burton Township	135,000	
Butt Township	96,300	
Foley Township	1,600	
Franklin Township	75,000	
Joly Township	20,000	
Macauley Township	15	
Machar Township	26,000	
Monteith Township	9,200	
Muskoka Township	2,165	
Ryde Township	75,000	
Spence Township	6,450	
Wallbridge Township	<u>350</u>	1,142,080

Area planted on licensed Crown land - 386 acres
Area planted on unlicensed Crown land - 1,854 "

Pembroke District:

Burns Township	50,000	
Canisbay Township	1,250	
Clancy Township	691,000	
Edgar Township	172,800	
Guthrie Township	50,000	
Peck Township	1,015	
Petawawa Township	10	
Sproule Township	1,000	
White Township	<u>172,800</u>	1,139,875

Area planted on licensed Crown land - 1,598 acres
Area planted on unlicensed Crown land - 2 "

Port Arthur District:

Adrian Township	105,000	
Fraleigh Township	250,000	
Hartington Township	50,000	
Sibley Township	40,000	
Strange Township	50,000	
Unsurveyed - Jackinness Lake Area	1,364,225	
Unsurveyed - Camp 39	100,000	
Port Arthur - Ontario Hospital	<u>1,350</u>	1,960,575

Area planted on licensed Crown land - 1,704 acres
Area planted on unlicensed Crown land - 282 "

Sault Ste. Marie District:

Bridgeland Township	19,050	
Curtis Township	105,150	
Galbraith Township	3,000	
Gaudette Township	95,325	
Haughton Township	39,975	
Kirkwood Township	181,400	
Rose Township	342,890	
Tupper Township	25,375	
Whitman Township	150	
Township 2A	930,694	
Township 3A	211,762	
Township 3H	25,225	
Township 22 Range X	16,250	
Township 27 Range XII	800	
Township 27 Range XIII	3,000	
Township 27 Range XIV	1,400	
Township V	750,038	
Township W	<u>782,661</u>	3,534,145
Area planted on licensed Crown land	- 8,278 acres	
Area planted on unlicensed Crown land	- 1,044 "	

Sioux Lookout District:

Echo Township	100,000	
Unsurveyed - Inspiration Lake Area	100,000	
Unsurveyed - Kopka River Area	50,000	
Unsurveyed - Two-Island Lake Area	<u>50,000</u>	300,000
Area planted on licensed Crown land	- 530 acres	
Area planted on unlicensed Crown land	- 75 "	

Sudbury District:

Aylmer Township	80,000	
Bigwood Township	25,000	
Cherriman Township	133,000	
Cox Township	154,413	
Delamere Township	25,000	
Foster Township	92,225	
Gough Township	154,700	
Halifax Township	71,000	
Hallam Township	34,125	
Hawley Township	14,250	
Hendrie Township	14,250	
McKim Township	722	
McKinnon Township	6,000	
McLennan Township	121,500	
Merritt Township	20,000	
Mongowin Township	1,000	
Nairn Township	1,000	
Scadding Township	214,629	
Scollard Township	1,500	
Servos Township	49,675	
Street Township	362,250	
Tennyson Township	347,550	
Victoria Township	1,000	
129 Township	<u>449,525</u>	2,374,314
Area planted on licensed Crown land	- 803 acres	
Area planted on unlicensed Crown land	- 2,320 "	

Swastika District:

Arnold Township	43,250	
Beauchamp Township	360,500	
Benoit Township	1,000	
Bernhardt Township	133,400	
Bond Township	68,000	
Burt Township	650	
Cane Township	1,000	
Clifford Township	10	
Eventual Township	41,264	
Gauthier Township	53,500	
Grenfell Township	144	
Gross Township	40,000	
Lee Township	106,500	
McCool Township	332,500	
McEvay Township	204,000	
Ray Township	<u>539,625</u>	1,925,343

Area planted on licensed Crown land - 1,260 acres
Area planted on unlicensed Crown land - 1,121 "

Tweed District:

Ashley Township	35,000	
Athol Township	22,000	
Bagot Township	7,300	
Barrie Township	27,500	
Darling Township	52,700	
Faraday Township	60,000	
Griffith Township	176,000	
Grimsthorpe Township	43,000	
Hallowell Township	66,500	
Hungerford Township	25	
Lavant Township	5,000	
Limerick Township	15,000	
Lyndoch Township	107,000	
McClure Township	273,000	
Palmerston Township	33,500	
Radcliffe Township	50,000	
Raglan Township	65,000	
Sebastopol Township	15,000	
Thurlow Township	75	
Tudor Township	15,000	
Wicklow Township	<u>200,000</u>	1,268,600

Area planted on licensed Crown land - 663 acres
Area planted on unlicensed Crown land - 1,455 "

White River District:

Mikano Township	1,472,025	
28 Township	6,000	
Unsurveyed - Black River Area	94,100	
Unsurveyed - Near Heron Bay	<u>3,000</u>	1,575,125

Area planted on licensed Crown land - 2,488 acres
Area planted on unlicensed Crown land - nil

Unclassified:

Etobicoke Township	285	
Guelph Township	158	
Hindon Township	22,000	
Ridout Township	3,000	
Sherborne Township	5,000	
Niagara Parks Commission	3,200	
King's Highways	<u>37.680</u>	<u>71.323</u>

Total Area planted on licensed Crown land - 33,002 ac.

Total area planted on unlicensed Crown land - 21,873 "

Total 31,564,608

Trees planted on County, Township and
Conservation Authority Forests managed by the Minister

<u>County:</u>	<u>Trees</u>	
Bruce	99,000	
Dufferin	1,500	
Grey	40,500	
Halton	4,500	
Huron	85,700	
Lanark	171,000	
Leeds & Grenville	102,000	
Lennox & Addington	12,800	
Middlesex	8,000	
Northumberland & Durham	94,500	
Ontario	12,000	
Oxford	44,000	
Prescott & Russell	767,600	
Renfrew	40,000	
Simcoe	193,500	
Stormont, Dundas & Glengarry	105,000	
Victoria	85,475	
Wentworth	55,700	
York	<u>74,250</u>	1,997,025
 <u>Township:</u>		
Charlottenburgh	25,000	
Galway & Cavendish	12,025	
Marlborough	<u>4,475</u>	41,500
 <u>Conservation Authority</u>		
Ausable River	254,360	
Big Creek Region	22,600	
Ganaraska River	376,500	
Grand Valley	502,250	
Metropolitan Toronto & Region	139,750	
Middle Maitland Valley	62,500	
Moirs River	175,200	
Neebing Valley	60,000	
North Grey Region	169,000	
Otter Creek	13,000	
Sauble Valley	94,000	
Saugeen Valley	137,500	
Upper Thames River	<u>20,600</u>	<u>2,027,260</u>
Total		<u>4,065,785</u>
 Total area planted - 6,739 acres		

STAND IMPROVEMENT

In previous annual reports details of the stand improvement program on Crown lands have been reported. Included with the report of Crown land operations is a report of similar work on Agreement Forests.

Stand improvement projects have as their objective either the establishment of regeneration or the improvement of an existing stand of timber.

In the treatment of existing stands of timber, projects range from pruning, removal of cull stems, etc. which do not produce a marketable product to projects such as thinning, removal of overtopping butt marketable stems, which produce forest products such as sawlogs, poles, and pulpwood, while at the same time accomplishing the silvicultural objective of stand improvement. For the most part this latter type of project is carried out in plantations on Agreement Forests.

A feature of those projects which do not produce marketable products is that they can be carried out at times of the year when, and in locations where, unemployment may be prevalent. Such projects benefit both the local community and the forest.

1960-61 Stand Improvement Program

Crown Lands

<u>District</u>	<u>Projects</u>	<u>Area in Acres</u>
Chapleau	Machine scarification	275
	Cleaning	<u>1,450</u>
	Total:	<u>1,725</u>
Cochrane	Machine scarification	280
	Liberation and improvement cutting	394
	Thinning	40
	Harvest cutting	<u>75</u>
	Total:	<u>789</u>
Fort Frances	Hand scarification	58
	Cleaning	22
	Thinning	31
	Road (const. & maintenance, 1 mile)	<u> </u>
	Total:	<u>111</u>
Geraldton	Machine scarification	<u>160</u>
	Total:	<u>160</u>
Gogama	Cleaning	<u>380</u>
	Total:	<u>380</u>
Kapuskasing	Machine scarification	32
	Cleaning	34
	Girdling	376
	Road (const. & maintenance, 5.6 miles)	
	Harvest cutting	<u>40</u>
	Total:	<u>482</u>
Kenora	Machine scarification	40
	Cleaning	26
	Girdling	<u>63</u>
	Total:	<u>129</u>

<u>District</u>	<u>Project</u>	<u>Area in Acres</u>
Lake Erie	Ground Spraying	39
	Liberation and Improvement cutting	107
	Thinning	56
	Harvest Cutting	<u>46</u>
	Total:	<u>248</u>
Lake Simcoe	Liberation and Improvement cutting	8
	Harvest cutting	<u>3</u>
	Total:	<u>11</u>
Lindsay	Machine scarification	700
	Girdling	1,510
	Liberation & Improvement cutting	160
	Pruning	<u>1,314</u>
	Total:	<u>3,684</u>
North Bay	Machine scarification	5
	Tree Marking	2,328
	Cleaning	100
	Frilling and poisoning	103
	Thinning	15
	Pruning	15
	Harvest cutting	<u>100</u>
	Total:	<u>2,666</u>
Parry Sound	Machine scarification	528
	Cleaning	<u>516</u>
	Total:	<u>1,044</u>
Pembroke	Machine scarification	1,851
	Cleaning	322
	Girdling	104
	Thinning	210
	Pruning	<u>51</u>
	Total	<u>2,538</u>

<u>District</u>	<u>Project</u>	<u>Area in Acres</u>
Port Arthur	Machine scarification	60
	Cleaning	190
	Liberation & Improvement cutting	<u>383</u>
	Total:	<u>633</u>
Sault Ste. Marie	Machine scarifications	74
	Liberation & improvement cutting	60
	Thinning	46
	Pruning	110
	Road (const. & maintenance- 4 miles)	_____
	Total:	<u>290</u>
Sudbury	Hand scarification	40
	Machine scarification	24
	Road (const. & maintenance- 4 miles)	_____
	Total:	<u>64</u>
Tweed	Machine scarification	48
	Tree Marking	1,000
	Cleaning	1,930
	Liberation & Improvement cutting)	23
	Pruning	210
	Road (constr. & maintenance- 14.1 Miles)	_____
	Total:	<u>3,418</u>
White River	Machine scarification	<u>72</u>
	Total:	<u>72</u>
	<u>Grand Total</u>	<u>18,444</u>

Summary of Stand Improvement

Expenditures 1960-61

	<u>Acreage</u>
Site Preparation	
Hand scarification	98
Machine scarification	4,149
Brush control, ground	39
Cleaning	4,970
Tree Marking	3,328
Liberation and Improvement	
Girdling	2,053
Frilling and poisoning	103
Cutting	1,342
Thinning	398
Pruning	1,700
Harvest cutting	264
Total acreage	<u>18,444</u>
Road construction and maintenance	<u>29.1 miles</u>

1960-61 STAND IMPROVEMENT PROGRAMME

AGREEMENT FORESTS

<u>District</u>	<u>Project</u>	<u>Area in Acres</u>
Aylmer	Clearing	87
	Liberation Cutting	25
	Thinning	40
	Improvement Cutting	6
	Christmas Tree Culture	15
	Harvest Cutting	<u>40</u>
	Total	<u>213</u>
Hespeler	Clearing	35
	Liberation Cutting	231
	Crop Tree Pruning	427
	Thinning	168
	Improvement Cutting	154
	Christmas Tree Culture	323
	Frilling and Poisoning	345
	Harvest Cutting	<u>58</u>
	Total	<u>1,741</u>
Maple	Clearing	68
	Liberation Cutting	55
	Crop Tree Pruning	1,092
	Thinning	255
	Improvement Cutting	50
	Christmas Tree Culture	80
	Harvest Cutting	<u>43</u>
	Total	<u>1,643</u>
Lindsay	Clearing	27
	Liberation Cutting	62
	Crop Tree Pruning	747
	Thinning	178
	Improvement Cutting	169
	Christmas Tree Culture	288
	Girdling	<u>411</u>
	Total	<u>1,882</u>
Kemptonville	Clearing	10
	Liberation Cutting	423
	Crop Tree Pruning	114
	Thinning	119
	Improvement Cutting	8
	Harvest Cutting	<u>20</u>
	Total	<u>695</u>
Port Arthur	Clearing	<u>10</u>
	Total	<u>10</u>
Total for all Districts		<u>6,184</u>

Summary of Stand Improvement

Agreement Forests	1960-61
Site Preparation	
Clearing	238
Liberation and Improvement	
Girdling	411
Poisoning	345
Cutting	1,183
Thinning	760
Pruning	2,380
Harvest Cutting	161
Christmas Tree Culture	706
Total Acreage	6,184

FOREST MANAGEMENT PLANNING - MARCH 31, 1961

The management plans of the forest lands of the Province are undergoing a progressive revision which will be concluded in 1970. The outlines to be followed in relation to the forests managed by the Minister are contained in the Manual of Management Plan Requirements. The main features of a revised management plan are: overall development of the forest to bring out the potentialities of the unit during the current rotation; analysis of management achievements and implementation of progressive recommendations every twenty years; and preparation every 10 years of detailed operating plans for that decade, which are in agreement with the overall management plan.

The number of management units, i.e. areas operated under a single management plan, is subject to continuous changes caused by abandonment of licences, acquisition, division, and consolidation of management units. The present number of management units is: 76 Crown, 79 Company, 42 Agreement Forests and 5 Nursery Forests - 202 in all.

Management Plans

1. Crown Management Units - plans prepared by Department staff.

There are 76 management units with a total area of 53,695,819 acres, provided with management plans as follows:

11 - under current revision

65 - original plans still in force

76 - plans in operation.

To have workable operating plans for all the units, the Interim Operating Plans are being prepared for the Crown units still under the original plans until the management plan revision takes place, which will occur at the scheduled time during the nine-year period. These interim plans specify the kinds and volumes of timber to be cut, its location and the measures to be used to replace it. Nineteen such plans were received this year.

TIMBER SALES 1960-61

Crown Timber Sales C.T.A. 2	(1)	62	48.80	Sq. Miles
Crown Timber Sales C.T.A. 3	(1)	56	593.20	" "
Crown Timber Sales C.T.A. 4	(1)	3	8.20	" "

ABANDONMENTS

In the fiscal year 1960-61 licensed areas in the amount of 1973.11 square miles were abandoned.

Summary of area under Crown Timber Licence classified in accordance with the Crown Timber Act as of March 31st, 1961.

Year	Licences under Section 2	Licences under Section 3	Licences under Section 4	Total Area
1956-57	5,600.65	89,952.49	200.94	95,754.08
1957-58	5,354.80	98,149.46	181.33	103,685.59
1958-59	4,520.62	99,612.16	199.90	104,332.68
1959-60	4,206.22	99,818.60	186.98	104,211.80
1960-61	3,647.71	99,103.39	137.79	102,888.89

SUMMARY OF VOLUME AND VALUE OF WOOD CUT BY SPECIES

DURING 1959-60

Softwood

<u>Species</u>	<u>Cubic Feet</u>	<u>Value</u>
Balsam	13,050,706.18	\$276,615.30
Cedar	268,163.16	7,696.67
Hemlock	3,767,958.69	95,264.09
Pine, Jack	78,242,521.58	2,193,172.50
Pine, Red	6,188,439.26	334,245.94
Pine, White	22,299,999.66	1,265,590.35
Spruce	186,919,939.06	6,956,444.02
Tamarack	26,466.06	750.67
Christmas Trees	3,064.50	377.14
Fuelwood	<u>1,525,234.05</u>	<u>10,571.62</u>
	312,292,492.20	11,140,728.30

Hardwood

Ash	83,142.04	\$2,284.97
Basswood	364,690.78	21,708.71
Beech	273,477.20	4,659.61
Birch, White	1,426,289.86	24,360.21
Birch, Yellow	7,397,288.74	571,534.29
Butternut	1,104.49	44.61
Cherry	26,512.14	862.62
Elm	256,029.57	8,541.83
Maple	4,850,515.44	185,911.52
Oak	176,512.26	7,303.22
Poplar	19,772,508.55	197,190.12
Fuelwood	<u>1,219,251.05</u>	<u>9,750.65</u>
	<u>35,847,322.12</u>	<u>1,034,152.36</u>
Total all species	348,139,814.32	11,823,880.56

Note: Value of export levy not included in above figures.

The mills licensed during the year under The Crown Timber Act were as follows:

Less than 10,000 ft. daily capacity	668
10,000 to 50,000 ft. " "	121
Over 50,000 ft. " "	27
Pulp Mills	24

SCALING

Scaling examinations during the past year were held at the following locations and dates:

<u>Location</u>	<u>Date</u>
Forest Ranger School, Dorset, Ontario	April 8th, 1960
Forest Ranger School, Dorset, Ontario	May 6th, 1960
Longlac, Ontario	September 30th, 1960

Timber Licences Issued	1,250
Pulpwood Licences	212

TIMBER SALES FROM APRIL 1st, 1960 TO MARCH 31st, 1961

Date Offered 1960	Date Sold 1960	Locality	Area No. of Tenders Sq.M.	To Whom Sold	Kind of Timber	Prices Paid			Total
						Bid	Bonus	Dues	
Apr. 29	May 2	Pt. Kennedy Twp.	.1	Jean Dumont Brower, Ontario	spruce pulpwood balsam pulpwood	\$2.45 nil	\$.55 .80	\$2.80 1.40	\$5.80 2.20 for ea.cd.
Mar. 29	May 3	Pt. Joan Twp.	.47	William Milne & Sons Ltd Timagami, Ontario	W.Pine sawlogs R.Pine sawlogs	1.55 .75	7.00 5.00	5.00 5.00	13.55 10.75 for ea.MBM
Apr. 14	May 2	Pt. Kennedy Twp.	.1	Howard Reicosky Brower, Ontario	spruce sawlogs spruce pulpwood balsam pulpwood	nil 1.81 2.89	3.00 .55 .80	4.00 2.80 1.40	7.00 5.16 5.09 for ea.cd.
Mar. 24	Apr. 20	Pt. Godfrey Twp.	.05	Joseph Morin 39 William St. Timmins.	spruce pulpwood balsam pulpwood	1.05 1.60	1.00 .60	2.80 1.40	4.85 3.60 for ea.cd.
Apr. 25	May 18	Pt. Whitney Twp.	.07	Edward B. O'Neill 184 Pearl Ave., Timmins	spruce pulpwood balsam pulpwood	1.55 2.90	.20 .60	2.80 1.40	4.55 4.50 for ea.cd.
Feb. 11	Apr. 19	Pt. Lucas Twp.	1.0	Henry Swanson, Box 1290, Cochrane, Ont.	spruce pulpwood	.21	.20	2.80	3.21 for ea.cd.
Apr. 5	May 2	Pts. Kennedy & Glackmeyer Twps.	.2	Paul Emile Viau Box 196, Cochrane, Ont.	spruce pulpwood balsam pulpwood	1.59 3.92	.55 .80	2.80 1.40	4.94 6.12 for ea.cd.
Apr. 13	May 2	Pt. Kennedy Twp.	.1	Peter Kolomeitz Dunning, Ontario	spruce pulpwood balsam pulpwood	1.03 2.80	.55 .80	2.80 1.40	4.38 5.00 for ea.cd.
May 2	May 24	Pt. Fournier Twp.	.2	N. Froude Box 441, Cochrane, Ont.	spruce pulpwood	2.71	.55	2.80	6.06 for ea.cd.
Mar. 23	July 8	Pts. Keefer, Frey & Sewell Twps.	5.8	Leo Lapierre 422 Wilson Ave., Timmins	Salvage spruce pulpwood J.Pine pulpwood W.Pine sawlogs R.Pine sawlogs Fuelwood	1.50 1.50 .027 .033 .027 .75	2.80 2.00 .033 .033 .06 .50	2.80 2.00 2.00 2.80	4.30 3.50 3.06 1.25 for ea.cd. "ea.cuft " " " " " " "
June 1	June 28	Pt. Burt Twp.	.1	H.S. Rodgers Lbr.Co.Ltd. Box 81, Englehart, Ont.	J.Pine sawlogs spruce sawlogs J.Pine pulpwood Spruce pulpwood	.0565 .047 .10 1.20	.0235 .033 2.00 2.80	.08 .08 2.10 4.00	.08 .08 2.10 4.00 for ea.cft " " " " " " "
July 28	Aug. 8	Pt. Twp. 13G	.5	Island Lake Lbr. Co.Ltd. Box 310, Chapleau, Ont.	Salvage J.Pine sawlogs spruce sawlogs J.Pine pulpwood spruce pulpwood	2.75 3.15	1.00 .50 .65 .65	2.80 1.40 .50 .50	.015 .02 1.25 1.70 for ea.cd. " " " " " " "
Apr. 28	May 11	Pt. Leitch Twp.	.1	John Beale Box 361, Cochrane, Ont.	spruce pulpwood balsam pulpwood	2.75 3.15	1.00 .50 .65 .65	2.80 1.40 .50 .50	5.55 4.55 4.80 1.45 1.45 for ea.cd. " " " " " " "
May 19	June 17	Pt. Spraggs Twp.	.2	Thomas D. Fitzpatrick Box 926, Blind River, Ont.	spruce pulpwood balsam pulpwood W.Birch pulpwood poplar pulpwood	1.00 .40 .30 .30	1.00 .50 .65 .65	2.80 1.40 .50 .50	4.80 2.30 1.45 1.45 for ea.cd. " " " " " " "
Apr. 29	May 31	Area between Redgut Bay and Porter In- let, Rainy Lake	3.2	Victor Pearson Box 113, Fort Frances	R.Pine sawlogs W.Pine sawlogs J.Pine sawlogs spruce sawlogs balsam sawlogs cedar sawlogs poplar sawlogs J.Pine pulpwood spruce pulpwood balsam pulpwood poplar pulpwood	5.00 5.00 2.00 2.00 nil nil nil .10 .25 .15 nil	5.00 5.00 2.00 4.00 2.00 2.00 3.00 1.50 2.00 2.80 1.40 .50	15.00 15.00 8.00 10.00 6.00 5.00 1.50 2.35 3.75 1.65 1.60 for ea.MBM " " " " " " "	

Date Offered	Date Sold	Locality	Area Sq. M.	No. of Tenders	To Whom Sold	Kind of Timber	Prices Paid			Total
							Bid	Bonus	Dues	
Apr. 13	Aug. 24	Area South of Grassy Lake	3.5	2	Lundy Brothers Emo, Ontario	J.Pine sawlogs spruce sawlogs balsam sawlogs poplar sawlogs J.Pine pulpwood spruce pulpwood balsam pulpwood poplar pulpwood	\$.20 .20 .20 nil .25 .70 .50 .50 .25	\$2.00 4.00 2.00 1.50 2.00 2.80 2.00 1.40 .50	4.00 4.00 4.00 1.50 2.00 2.80 2.00 1.40 .85	for ea.MBM "
June 21	July 22	Cardwell Twp.	.46	2	Gerald Butler Box 1093, Huntsville, Ont.	hemlock sawlogs maple sawlogs Y.Birch sawlogs W.Birch sawlogs Beech sawlogs B.Cherry sawlogs	2.00 3.00 3.00 2.00 2.00 4.00	3.00 4.00 10.00 1.50 1.50 1.00	3.00 5.00 5.00 1.50 5.00 5.00	for ea.MBM " " " " " " " " " " " " " " "
Mar. 23	May 10	Part Little Twp.	2.75	4	Chaput's Fuel Co. 150 Windsor Ave., Timmins, Ontario	spruce sawlogs spruce pulpwood balsam pulpwood	.03 1.65 2.00	.007 .60 .80	.033 2.80 1.40	for ea.cft " " " " " "
June 2	June 29	Gurd Twp.	.9	1	Arthur Booth Commanda, Ontario	maple sawlogs Y.Birch sawlogs hemlock sawlogs	6.00 6.00 5.00	3.00 10.00 3.00	5.00 5.00 3.00	for ea.MBM " " " " " "
June 28	Aug. 12	Meigund Twp.	0.1	2	George S. Higgins Dymont, Ontario	J.Pine pulpwood spruce pulpwood	.20 1.30	.55 .95	2.00 2.80	for ea.cd. " " "
June 21	Aug. 12	Meigund Twp.	0.1	1	William G. Higgins Dymont, Ontario	J.Pine pulpwood spruce pulpwood	.20 1.30	.55 .95	2.00 2.80	for ea.cd. " " "
July 21	Aug. 9	Area Vicinity of East Lake	0.1	3	Ed. H. Wilson / Jones, Ont. Via Redditt	J.Pine pulpwood spruce pulpwood	.20 1.25	.55 .95	2.00 2.80	for ea.cd. " " "
July 14	Aug. 8	Area South Knickerbocker Inlet	0.6	1	Walter E. Larson Box 245, Sioux Narrows	spruce pulpwood balsam pulpwood	.25 .10	.95 .35	2.80 1.40	for ea.cd. " " "
July 14	Aug. 5	Ft. Revell Twp.	0.1	1	Andre Dube Box 1330, Dryden, Ont.	J.Pine pulpwood spruce pulpwood	1.00 1.00	.55 .95	2.00 2.80	for ea.cd. " " "
July 22	Aug. 18	Pt.Hartman Twp.	0.1	2	J.G. Bartlett Box 883, Dryden, Ontario	J.Pine pulpwood spruce pulpwood balsam pulpwood	1.00 1.25 1.25	.55 .95 .35	2.00 2.80 1.40	for ea.cd. " " " " " "
July 27	Aug. 19	Pt. Hartman Twp.	0.1	3	Stanley J. Rollins R.R. #1, Dryden, Ontario	J.Pine pulpwood spruce pulpwood balsam pulpwood	.25 1.25 .50	.55 .95 .35	2.00 2.80 1.40	for ea.cd. " " " " " "
Aug. 2	Aug. 30	Pt. Awares Twp.	0.6	1	Samuel Joseph Logging Co. Ltd. Goulais River, Ontario	W.Pine sawlogs spruce sawlogs hemlock sawlogs Y.Birch sawlogs maple sawlogs oak sawlogs	2.00 1.00 2.00 15.00 2.00 2.00	5.00 6.00 2.00 15.00 5.00 5.00	5.00 4.00 3.00 5.00 5.00 5.00	for ea.MBM " " " " " " " " " " " " " " "
Sept. 2	Sept. 20	Area East of Granite Lake	0.1	2	Fred Marcine 22½ Second St.N,Kenora	J.Pine pulpwood spruce pulpwood	.75 .25	.25 .95	2.00 2.80	for ea.cd. " " "
Sept. 9	Sept. 30	Pt. Revell Twp.	0.1	1	Colin McDonald Perrault Falls, Ontario	J.Pine pulpwood spruce pulpwood	.30 .25	.55 .95	2.00 2.80	for ea.cd. " " "

TIMBER SALES FROM APRIL 1st, 1960 TO MARCH 31st, 1961

Date Offered 1960	Date sold 1960	Locality	Area of Sq. Meters	To Whom Sold	Kind of Timber	Prices Paid			Total
						Bid	Bonus	Dues	
Apr. 12	May 3	Pt. Clute Twp.	3.1 2	Charles Shier & Sons Huntia, Ontario	spruce pulpwood balsam pulpwood poplar pulpwood	\$2.10 3.20 .50	\$.50 .80 .25	\$2.80 1.40 .50	\$5.40 for ea.cd. 5.40 " " " 1.25 " " "
July 21	Aug. 8	Pt. Boys Twp. #2	0.1 2	James K. Alcock R.R. #1, Kenora	J. Pine pulpwood spruce pulpwood	.65 1.05	.25 .95	2.00 2.80	2.90 for ea.cd. 4.80 " " "
July 19	Aug. 8	Pt. Haycock Twp.	0.2 2	V. Morrison Box 453, Kenora, Ontario	J. Pine pulpwood spruce pulpwood balsam pulpwood	.60 1.40 .40	.25 .95 .35	2.00 2.80 1.40	2.85 for ea.cd. 5.15 " " " 2.15 " " "
July 28	Aug. 16	Part German Twp.	0.6 3	Porquis Forest Products Ltd. Porquis, Ontario	spruce pulpwood balsam pulpwood	1.35 1.00	.80 .80	2.80 1.40	4.95 for ea.cd. 3.20 " " "
Aug. 30	Sept. 20	Part Boys Twp. #3	0.1 3	Clifford A. Alcock R.R. #1, Kenora	J. Pine pulpwood spruce pulpwood	.75 1.05	.25 .95	2.00 2.80	3.00 for ea.cd. 4.80 " " "
Sept. 2	Sept. 26	John Lake Area	0.2 3	J. Bogden R.R. #1, Kenora	J. Pine sawlogs J. Pine pulpwood spruce pulpwood	0.0125 nil 1.85	0.0065 .55 .95	0.0235 2.00 2.80	0.0425 for ea.cft. 2.55 " " " 5.60 " " "
Oct. 3	Oct. 24	E. of Hwy. 105 - 25 mi. S.E. of the Town of Red Lake	1.9	Canadian Forest Products Ltd. 120 Grain Exchange Annex Winnipeg, Man.	Salvage spruce pulpwood		1.00	2.80	3.80 for ea.cd.
Aug. 25	Sept. 23	Pt. Hardy Twp.	0.7 5	Halliet Brooks Loring, Ontario	hemlock sawlogs Y. Birch sawlogs maple sawlogs elm sawlogs basswood sawlogs ash sawlogs spruce sawlogs W. Pine sawlogs	7.00 8.00 7.00 7.00 2.00 6.00 2.00 2.00	3.00 12.00 4.00 2.00 9.00 1.00 7.00 9.00	3.00 5.00 5.00 5.00 5.00 4.00 5.00 5.00	13.00 for ea.cd. 25.00 " " " 16.00 " " " 14.00 " " " 16.00 " " " 12.00 " " " 13.00 " " " 16.00 " " "
Oct. 3	Oct. 18	Pt. Boys Twp.	0.1 5	Robert Duncan R.R. #1, Kenora, Ontario	J. Pine pulpwood spruce pulpwood	1.25 1.25	0.25 0.95	2.00 2.80	3.50 for ea.cd. 5.00 " " "
Aug. 22	Sept. 23	Pt. Patterson Twp.	0.3 2	B. V. Young Box 2, Powassan, Ontario	hemlock sawlogs W. Pine sawlogs spruce sawlogs Y. Birch sawlogs maple sawlogs ash sawlogs oak sawlogs elm sawlogs Basswood sawlogs	2.00 4.00 1.00 15.00 1.00 1.00 1.00 1.00 1.00	3.00 9.00 7.00 4.00 2.00 9.00 2.00 9.00 9.00	3.00 4.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00	8.00 for ea.cd. 18.00 " " " 12.00 " " " 32.00 " " " 10.00 " " " 8.00 " " " 15.00 " " " 7.00 " " " 15.00 " " "
Aug. 28	Sept. 23	Pt. McConkey Twp.	0.8 4	Stanley Brooks Loring, Ontario	maple sawlogs hemlock sawlogs Y. Birch sawlogs Basswood sawlogs elm sawlogs spruce sawlogs W. Pine sawlogs	10.00 5.00 7.00 3.00 7.00 3.00 3.00	3.00 3.00 11.00 8.00 2.00 6.00 8.00	5.00 3.00 5.00 5.00 5.00 4.00 5.00	18.00 for ea.cd. 11.00 " " " 23.00 " " " 16.00 " " " 14.00 " " " 13.00 " " " 16.00 " " "
June 28	Aug. 11	Pt. Gurd Twp.	0.9 1	Arthur Booth Commanda, Ontario	maple sawlogs Y. Birch sawlogs Hemlock sawlogs	6.00 6.00 5.00	3.00 10.00 3.00	5.00 5.00 3.00	14.00 for ea.cd. 21.00 " " " 11.00 " " "
July 25	Aug. 8	Pt. Boyes Twp.	0.1 3	A.J. Griffiths R.R. #1, Kenora, Ontario	J. Pine pulpwood spruce pulpwood balsam pulpwood	nil 1.90 1.50	0.25 0.95 0.35	2.00 2.80 1.40	2.25 for ea.cd. 5.65 " " " 3.25 " " "

Date Offered 1960	Date Sold 1960	Locality	Area Sq. M.	No. of tenders	To Whom Sold	Kind of Timber	Prices Paid			Total	
							Bid	Bonus	Dues		
Aug. 29	Nov. 1	Part Hardy Twp.	2.0	4	Gilbert Gorham Loring, Ontario	W. Pine sawlogs spruce sawlogs hemlock sawlogs Y. Birch sawlogs maple sawlogs Basswood sawlogs oak sawlogs ash sawlogs elm sawlogs poplar sawlogs	\$6.25 5.25 6.25 15.25 7.25 4.25 4.25 6.25 6.25 4.25	\$9.00 7.00 3.00 12.00 4.00 5.00 9.00 1.00 2.00 1.50	\$5.00 4.00 3.00 5.00 5.00 5.00 5.00 5.00 5.00 1.50	\$20.25 16.25 12.25 32.25 16.25 18.25 18.25 12.25 13.25 7.25	for ea. MEM " " " " " " " " " " " "
Apr. 11	Oct. 30	Part Britton Twp.	0.1	4	Henry S. Emms, #1 Dryden, Ontario	J. Pine pulpwood spruce pulpwood	1.20 3.25	0.55 0.95	2.00 2.80	3.75 7.00	for ea. cd. " " " " " "
Jan. 8	Oct. 15	Part Harrow Twp.	3.2	2	Bishop Timber Company Ltd. Spanish, Ontario	spruce sawlogs spruce pulpwood balsam pulpwood W. Birch pulpwood poplar pulpwood	0.007 0.30 0.25 0.30 0.25	0.012 0.40 1.00 0.40 0.40	0.033 2.80 1.40 0.50 0.50	0.052 3.50 2.85 1.20 1.15	for ea. cft " " " " " "
Mar. 10	Mar. 18	Engineer Lake - Fergie Twp.	0.1	4	Clarence Day, R.R. #1 Kenora, Ontario	J. Pine pulpwood spruce pulpwood	0.25 1.35	0.25 0.95	2.00 2.80	2.50 5.10	for ea. cd. " " " " " "
July 19	Sept. 30	Part Hartman Twp.	0.1	5	Louis Robitaud, Box 1335, Dryden, Ont.	J. Pine pulpwood spruce pulpwood	1.30 1.20	0.55 0.95	2.00 2.80	3.85 4.95	for ea. cd. " " " " " "
Nov. 4	Dec. 6	Pt. Umbach Twp.	1.4	1	Arthur Gagnon, R.R. #1, Kenora, Ontario	J. Pine sawlogs spruce sawlogs J. Pine pulpwood spruce pulpwood balsam pulpwood	.0015 .0015 .12 .12 .20	.0065 .014 .55 2.80 .60	.0235 .033 2.67 4.12 1.40	.0315 .0485 2.67 4.12 2.20	" cuf " " " " " "
Oct. 5	Nov. 8	Pt. Lount Twp.	0.6	1	Fred Ulrich South River, Ontario	hemlock sawlogs Y. Birch sawlogs maple sawlogs elm sawlogs	.50 1.00 1.00 nil	3.00 12.00 4.00 1.00	3.00 5.00 5.00 5.00	6.50 18.00 10.00 6.00	for ea. MEM " " " " " "
Oct. 18	Nov. 15	Pt. McKinnon Twp.	3.4	1	William L. Reed, Redbridge, Ontario	W. Pine sawlogs hemlock sawlogs Y. Birch sawlogs W. Birch sawlogs maple sawlogs	5.00 2.00 5.00 5.00 2.00	10.00 3.00 20.00 8.50 5.00	5.00 3.00 5.00 1.50 5.00	20.00 8.00 30.00 15.00 12.00	for ea. MEM " " " " " "
Nov. 16	Dec. 20	Pt. Servos & Hoskin Twp.	4.2	1	Lionel Aime Lachapelle Estaire, Ontario	W. Pine sawlogs R. Pine sawlogs J. Pine sawlogs spruce sawlogs cedar sawlogs W. Pine pulpwood R. Pine pulpwood J. Pine pulpwood spruce pulpwood balsam pulpwood W. Birch pulpwood ash pulpwood poplar pulpwood	.01 .01 .005 .005 1.00 .10 .10 .10 .05 .10 .10 .10 .10	.057 .047 .0215 .047 1.00 .10 .10 .50 .10 .50 .50 .50	.033 .033 .0215 .033 3.00 1.40 1.40 2.00 2.80 1.40 .50 .50	.10 .09 .05 .085 5.00 1.60 1.60 2.60 2.95 2.00 1.10 1.10	for ea. cuf " " " " " "

TIMBER SALES FROM APRIL 1st, 1960 TO MARCH 31st, 1961

Date Offered 1960	Date Sold 1960	Locality	Area Sq. Meters	No. of tenders	To Whom Sold	Kind of Timber	Prices Paid			Total
							Bid	Ronus	Dues	
Nov. 10	Dec. 6	Pt. Faraday Twp.	1.2	1	Peter Freymond, R.R. #2, Bancroft, Ont.	W. Pine sawlogs spruce sawlogs balsam sawlogs hemlock sawlogs Y. Birch sawlogs W. Birch sawlogs maple sawlogs Basswood sawlogs oak sawlogs beech sawlogs poplar sawlogs cedar posts	\$1.60 1.60 2.00 2.00 2.50 1.60 2.00 5.00 6.00 nil 3.50 nil	\$13.00 14.00 6.00 5.00 13.00 6.00 9.00 13.00 5.00 6.00 nil nil	\$5.00 4.00 4.00 3.00 5.00 1.50 5.00 5.00 1.50 1.50 1.50 1.01	\$19.60 for ea. MBM 19.60 12.00 10.00 20.00 10.00 16.00 19.60 12.00 7.50 5.00 5.00 lin.ft.
Nov. 14	Dec. 13	Pt. Bonfield Twp.	0.9	1	L. Rancourt Bonfield, Ontario	R. Pine sawlogs W. Pine sawlogs spruce sawlogs Y. Birch sawlogs W. Birch sawlogs maple sawlogs ash, oak, elm poplar sawlogs spruce pulpwood balsam pulpwood W. Birch pulpwood poplar pulpwood	2.00 2.00 1.00 3.00 1.50 nil nil 1.00 nil 1.00 1.00 nil	10.00 10.00 10.00 10.00 8.00 5.00 8.00 4.00 2.00 60 50 50	5.00 5.00 4.00 5.00 1.50 5.00 5.00 2.80 1.40 1.40 1.00 50	17.00 for ea. MBM 17.00 15.00 18.00 11.00 10.00 13.00 6.50 3.00 3.00 1.00 1.00
Oct. 17	Nov. 15	Pt. McKinnon Twp.	4.3	1	G.L. McKnight Lee Valley, Ontario	hemlock sawlogs Y. Birch sawlogs maple sawlogs Y. Birch pulpwood maple pulpwood	nil nil nil nil nil	3.00 18.00 5.00 25 .75	3.00 5.00 5.00 .25 .50	6.00 for ea. MBM 23.00 10.00 .75 .75
Oct. 28	Nov. 18	Pt. Britton Twp.	0.1	3	G. Siebelt, Box 1311, Dryden, Ontario	spruce pulpwood balsam pulpwood	1.75 1.75	.95 .35	2.80 1.40	5.50 for ea. cd. 3.50
July 15	Aug. 23	Mg. Loc. "A", Deroche Twp.	0.3	2	Steve Storzuk, Goulais Bay, Ontario	spruce sawlogs Y. Birch sawlogs W. Birch sawlogs maple sawlogs oak sawlogs elm sawlogs spruce pulpwood balsam pulpwood	2.00 10.00 3.00 6.50 2.50 3.00 2.50 1.0	6.00 10.00 6.50 2.50 3.00 2.50 2.80 .10	4.00 5.00 1.50 5.00 5.00 5.00 2.80 1.40	12.00 for ea. MBM 25.00 13.00 13.50 10.00 10.00 3.00 1.60
Oct. 28	Nov. 18	Pt. Aubrey Twp.	0.2	1	J. Legault, Box 411, Dryden, Ontario	spruce pulpwood balsam pulpwood	.50 .75	.95 .35	2.80 1.40	4.25 for ea. cd. 2.50
Oct. 28	Nov. 18	Pt. Aubrey Twp.	0.1	1	R. Legault, Box 411, Dryden, Ontario	spruce pulpwood balsam pulpwood	.50 .75	.95 .35	2.80 1.40	4.25 for ea. cd. 2.50
Oct. 28	Nov. 18	Pt. Aubrey Twp.	0.1	1	L. Legault, Box 734, Dryden, Ontario	spruce pulpwood balsam pulpwood	.50 .75	.95 .35	2.80 1.40	4.25 for ea. cd. 2.50
Oct. 2	Nov. 25	Pt. Bethune Twp.	0.3	1	O.J. Ahola, Kearney, P.O., Ontario	Y. Birch sawlogs maple sawlogs spruce sawlogs hemlock sawlogs	3.00 1.00 1.00 1.00	10.00 4.00 6.00 3.00	5.00 5.00 4.00 3.00	18.00 for ea. MBM 10.00 11.00 7.00

TIMBER SALES FROM APRIL 1st, 1960 TO MARCH 31st, 1961

Date Offered 1961	Date Sold 1961	Locality	Area ten-Sq. Meters	No. of tenders	To Whom Sold	Kind of Timber	Prices Paid			Total	
							Bid	Romana	Dues		
Jan. 13	Feb. 3	Pt. Pringle Twp.	0.2	3	C. Ibbitson, Restoule, Ontario	hemlock sawlogs maple sawlogs Y.Birch sawlogs	\$3.00 3.00 23.00	\$4.00 4.00 12.00	\$3.00 5.00 5.00	\$10.00 12.00 40.00	for ea. MBM " " " " " "
Feb. 2	Feb. 20	Pts. Salter, Victoria & 129	0.9	1	J. Desjardins, Box 264, Massey, Ontario	W.Pine sawlogs R.Pine sawlogs spruce sawlogs balsam pulpwood W.Birch pulpwood poplar pulpwood	0.012 0.007 0.010 0.35 0.20 0.25	0.040 0.040 0.012 1.00 0.50 0.50	0.033 0.033 0.033 1.40 0.50 0.50	.085 .08 .055 2.75 1.20 1.25	for ea. cu ft " " " " " " " " " " " " " " "
Jan. 6	Jan. 25	Pt. Galbraith Twp.	0.4	1	Lloyd Black, R.R. #1, Ophir, Ontario	Y.Birch sawlogs maple sawlogs hemlock sawlogs spruce sawlogs	nil nil 0.50 5.00	30.00 10.00 4.50 11.00	5.00 5.00 3.00 4.00	35.00 15.00 8.00 20.00	for ea. MBM " " " " " " " " "

CROWN TIMBER LICENCES 1960/61
ISSUED BY VIRTUE OF SECTION 3 (1) C.T.A.

Order-in-Council Date	Description of Area	Name of Licensee	Expiry Date	Notice of Transaction
2267/60 June 2/60	Pt. Merrick Twp.	James A. Gibson & Sons Redbridge, Ontario.	March 31st, 1961	New transaction
2155/60 June 7/60	Pt. Fauquier Twp.	Spruce Falls Power & Paper Co. Ltd., 2 Carlton St., Toronto	Dec. 31st, 1961	Re-issue
1593/60 May 26/60	Pts. Aberdeen & Duncan Twp.	Birds Eye Veneer (Can.) Ltd. c/o Henry S. Hamilton, Q.C. Box 249, Sault Ste. Marie.	March 31st, 1963	Re-issue
1592/60 May 25/60	Pt. Phelps Twp.	James A. Gibson & Sons, Redbridge, Ontario.	March 31st, 1962	Re-issue
4113/57 July 11/60	Logging Chance 106, Bronson & Head Twp.	John Pershick, Renfrew, Ontario.	March 31st, 1962	Re-issue
2153/60 June 9/60	Pt. Guthrie Twp.	Pembroke Shook Mills, Pembroke, Ontario.	March 31st, 1961	Re-issue
W-9-453 June 29/60	Pts. Sherborne etc. Twp.	Carman N. Alldred, Phelpston, Ontario.	March 31st, 1963	Re-issue
2392/60 June 29/60	Pt. McClure Twp.	Bawson Robinson, Meynooth, Ontario.	March 31st, 1965	Re-issue
2157/60 June 8/60	Area W. of G.T.P. Block 1	J. F. Thomson, Ruttan Block, Port Arthur.	March 31st, 1964	Re-issue
2391/60 June 29/60	Area W. of Reba	Northern Forest Products Ltd., 2nd Avenue, Port Arthur, Ontario.	March 31st, 1969	New transaction
2154/60 June 7/60	Pt. Kennedy Twp.	T.B. Skidmore Forest Products Ltd., Box 911, Cochrane, Ont.	March 31st, 1963	New transaction
2240/60 June 14/60	Pt. Benoit Twp.	Woollings Forest Products Ltd., Englehart, Ontario.	March 31st, 1962	New transaction
3388/60 Aug. 17/60	Pt. Drayton Twp.	William Carlbom, Sioux Lookout, Ontario.	March 31st, 1961	New transaction
3455/60 Aug. 19/60	Pts. Dunmore & Holmes Twp.	H.S. Rodgers Lbr. Co. Ltd., Englehart, Ontario.	March 31st, 1963	New transaction
3615/60 Oct. 1/60	Melba Twp.	Woollings Forest Products Ltd., Englehart, Ontario.	March 31st, 1961	New transaction
3534/60 Aug. 30/60	Hillary Twp.	Rudolph McChesney Lbr. Co. Ltd. 267 Kraft Road, Timmins, Ont.	March 31st, 1961	New transaction
3624/60 Oct. 1/60	Chaplin & Ramsden Twp.	Chapleau Lumber Co. Ltd., Chapleau, Ontario.	March 31st, 1963	New transaction
3614/60 Oct. 1/60	Area S. of G.T.P. Block 2	A.E. Jacobson Lbr. Co. Ltd., 223 South Hill Street, Port Arthur, Ontario.	March 31st, 1963	New transaction
3822/60 Oct. 17/60	Pts. Strathcona & Strathy	Temagami Timber Co. Ltd. Goward, Ontario.	March 31st, 1963	Re-issue

CROWN TIMBER LICENCES 1960/61
ISSUED BY VIRTUE OF SECTION 3 (1) C.T.A.

Order-in-Council Date	Description of Area	Name of Licensee	Expiry Date	Notice of Transaction
4024/60 Oct. 17/60	Pt. Strathly Twp.	Wm. Milne & Sons Ltd., Timagami, Ontario.	March 31st, 1963	Re-issue
4256/60 Oct. 31/60	Pt. Notman Twp.	The Frawley Lake Lbr. Co. Ltd. Powassan, Ontario.	March 31st, 1962	Re-issue
4217/60 Nov. 2/60	Pt. Galway Twp.	Gerald Junkin, Bobcaygeon, Ontario.	March 31st, 1962	Re-issue
3822/60 Oct. 17/60	Pts. Strathcona & Strathly Twp.	Temagami Timber Co. Ltd. Goward, Ontario.	March 31st, 1963	Re-issue
3905/60 Oct. 17/60	Pt. Acadia Twp.	A.J. Murphy Lbr. Co. Ltd., Lathford, Ontario.	March 31st, 1963	New transaction
2110/57 Oct. 24/60	Pts. Tudor, etc. Twp.	Hinde & Dauch Paper Co. of Canada, 43 Hanna Ave., Toronto 3, Ontario.	March 31st, 1961	New transaction
4022/60 Oct. 17/60	Pt. Rodgers Twp.	F.P. & J. Lecours, Hearst, Ontario.	March 31st, 1965	New transaction
4255/60 Oct. 31/60	Pt. Leeson Twp.	Boisvert & Belanger Reg. La Sarré, Que.	March 31st, 1963	New transaction
4031/60 Oct. 11/60	Pt. Lomond Twp.	Frank W. Bowman, Hudson, Ontario.	March 31st, 1961	New transaction
4557/60 Nov. 21/60	Pts. Olrig & Phelps Twp.	Lakewoods Timber Ltd., Box 189, Woodstock, Ontario.	March 31st, 1963	Re-issue
558/60 Nov. 21/60	Pts. Morrisette Twp.	Haileybury Lumber Co. Ltd. Swastika, Ontario.	March 31st, 1963	Re-issue
4620/60 Nov. 29/60	Pts. Twp. 52, 53, 28, Range XXVII	Dubreull Brothers Limited, 530 Cathcart Street, Sault Ste. Marie, Ontario.	March 31st, 1969	New transaction
4977/61 Nov. 15/60	Area south of Namakan, Redhorse Operating Unit, Co., L.M.U., Red River District	The Ontario-Minnesota Pulp & Paper Co., Ltd., Fort Frances, Ontario.	March 31st, 1961	New transaction
4998/60 Nov. 14/60	Pt. Grenfell Twp.	Woollings Forest Products Limited, Englehart, Ontario.	March 31st, 1963	New transaction
5153/60 Nov. 12/60	Parts of Edgar & Bronson Twp.	Noik Lumber Company, P.O. Box 141, Pembroke, Ontario.	March 31st, 1963	New transaction
4916/60 Oct. 25/60	Pt. Mulligan Twp.	Reginald F. Walker, Englehart, Ontario.	March 31st, 1965	New transaction
4998/60 Dec. 19/60	Pt. Cook Twp.	Woollings Forest Products Ltd., Englehart, Ontario.	March 31st, 1963	New transaction
75/61 Jan. 23/61	Part Griffith Twp. Com- partments 59, 60, etc.	August E. Quade, Quadeville, Ontario.	March 31st, 1962	New transaction
5294/60 Jan. 23/61	Namakan Redhorse Operat- ing Unit	Namakan Timber Company Limited, 500 Colonization Road, W., Fort Frances, Ontario.	March 31st, 1963	New transaction

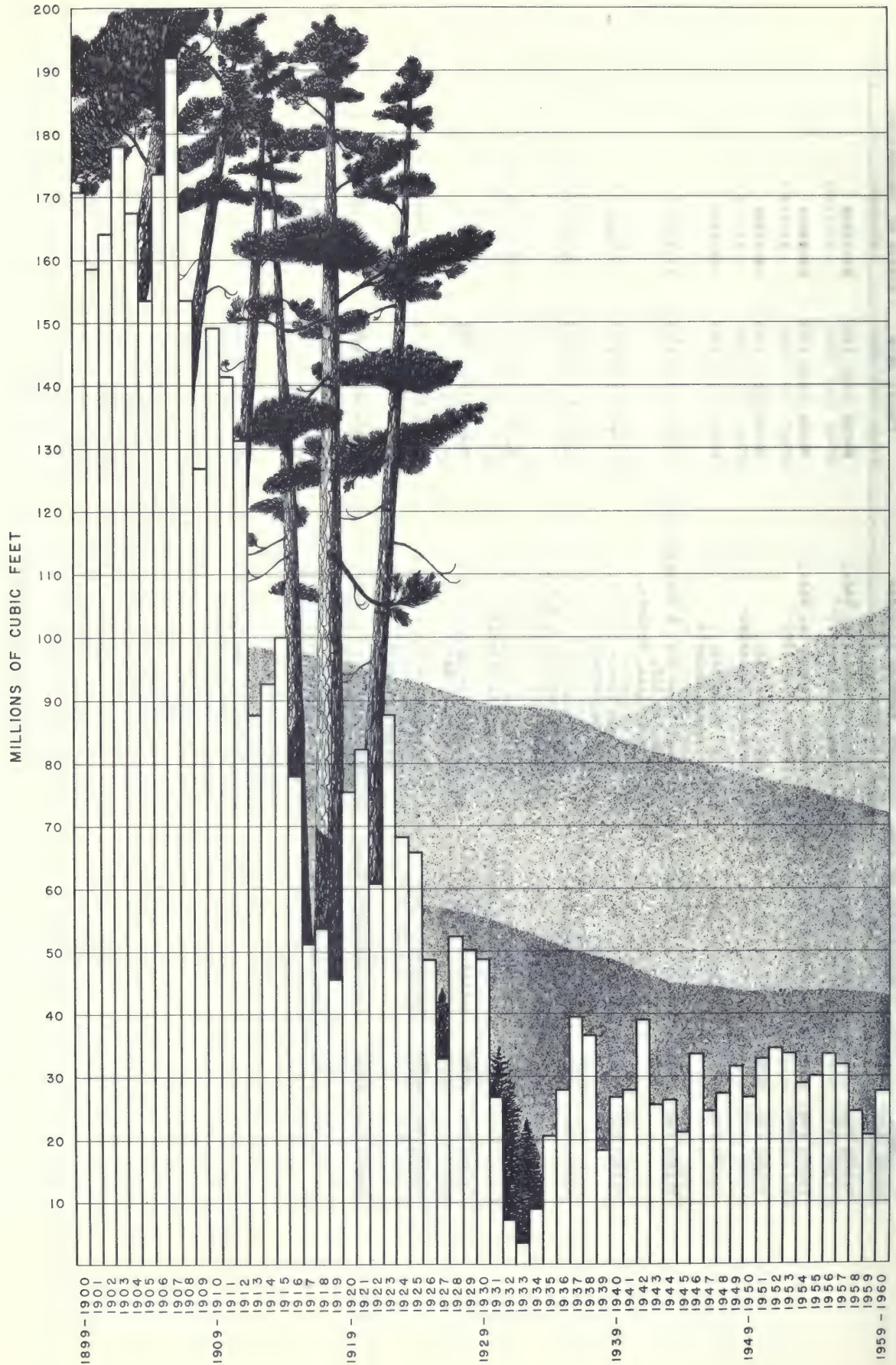
CROWN TIMBER LICENCES 1960/61

ISSUED BY VIRTUE OF SECTION 3 (1) C.T.A.

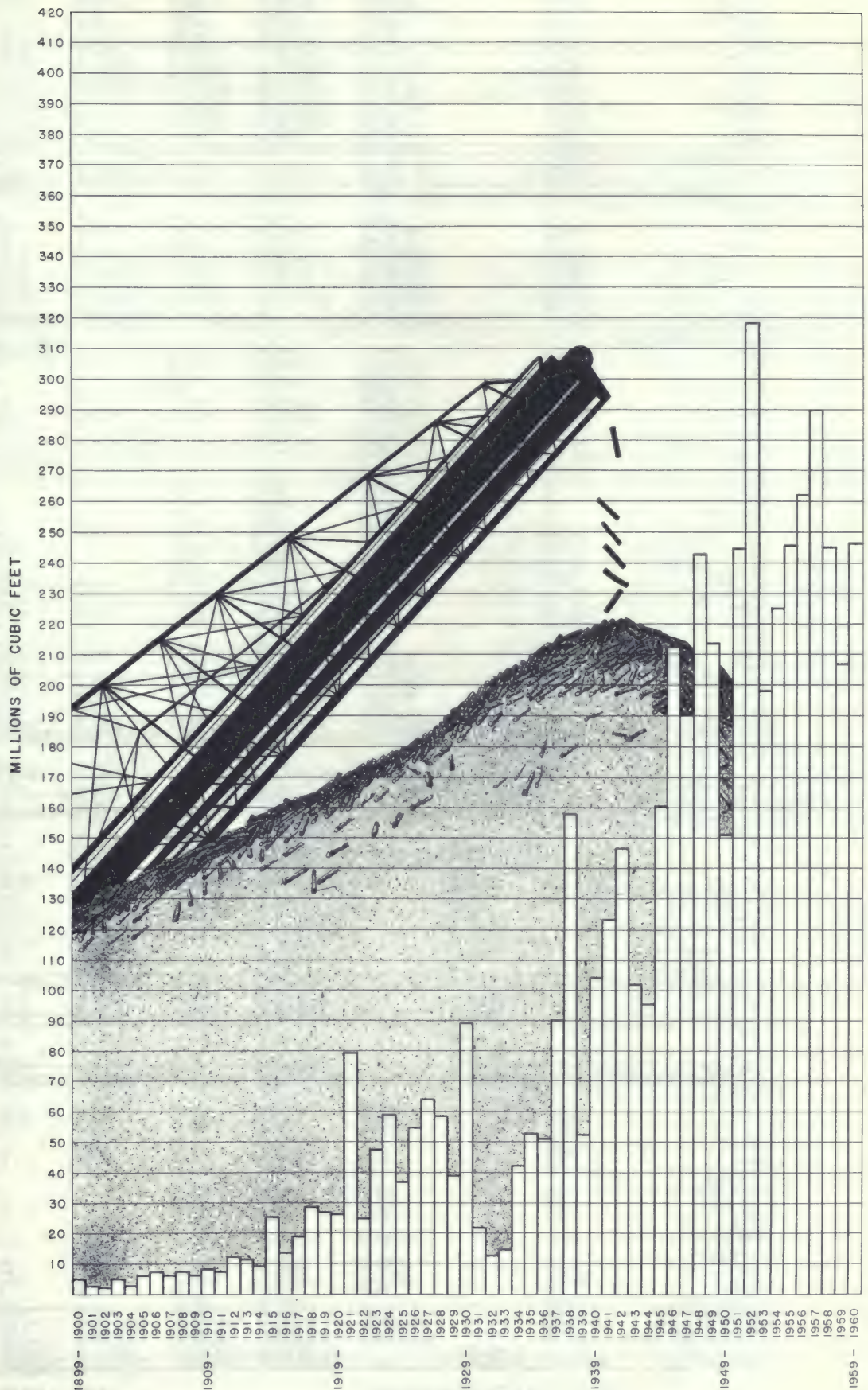
Order-in-Council Date	Description of Area	Name of Licensee	Expiry Date	Notice of Transaction
4751/60 Nov. 29/60	Basket Lake Area	Dryden Paper Company Limited, Dryden, Ontario.	March 31st, 1970	Re-issue
426/61 Feb. 8/61	Part Twp. 143	A. G. Wilson, Boulter, Ontario.	March 31st, 1963	New transaction
193/61 Feb. 8/61	Pt. Big Island	W. Norman Dalseg, Morsion, Ontario.	March 31st, 1963	New transaction
373/61 Feb. 8/61	Pt. Mageau Twp.	A. & L. Lafreniere Lbr. Co. Ltd., Chapleau, Ontario.	March 31st, 1961	New transaction
290/61 Mar. 8/61	Pt. Oakley Twp.	Mickle Dymant & Sons Limited, 520 Huron Street, London, Ontario.	March 31st, 1962	Re-issue
457/61 Feb. 8/61	Logging Chance 38, Niven Twp.	Herb. Shaw & Sons Limited, 183 Alfred Street, Pembroke, Ontario.	March 31st, 1961	Re-issue
643/61 Feb. 22/61	Pt. Harvey Twp.	Norman Pogue, Fenelon Falls, Ontario.	March 31st, 1961	Re-issue
349/61 Feb. 8/61	Pts. 28 & 29 Twp.	Kormak Lumber Co. Ltd., Kormak, Ontario.	March 31st, 1962	Re-issue
5206/60 Jan. 18/61	Pt. Aldina Twp.	Alfred E. Winslow, Kakabeka Falls, Ontario.	March 31st, 1963	Re-issue
716/61 Feb. 28/61	Pts. Keefe, Pharand, etc.	Rudolph-McChesney Lbr. Co. Ltd., Timmins, Ontario.	March 31st, 1964	Re-issue
716/61 Feb. 28/61	E. & Eldorado Twp.	Rudolph-McChesney Lbr. Co. Ltd., Timmins, Ontario.	March 31st, 1962	Re-issue
716/61 Feb. 28/61	Beemer, Moher, Etc. Twp.	Feldman Timber Co. Ltd., Timmins, Ontario	March 31st, 1964	Re-issue
716/61 Feb. 28/61	N.E. Pt. Bristol Twp.	Mountjoy Timber Co. Ltd., 207 Gillies Street, Timmins, Ontario.	March 31st, 1963	Re-issue
716/61 Feb. 28/61	Thornloe, Reynolds, etc.	Mountjoy Timber Co. Ltd., 207 Gillies Street, Timmins, Ontario.	March 31st, 1964	Re-issue
716/61 Feb. 28/61	Pt. Little Twp.	Feldman Timber Co. Ltd., Timmins, Ontario.	March 31st, 1963	Re-issue
2883/58 Mar. 23/61	Logging Chance 107, P.M.U.	H. Kutschke & Son Ltd., Pembroke, Ontario.	March 31st, 1962	Re-issue
716/61 Feb. 28/61	Pt. Little Twp.	Feldman Timber Co. Ltd., Timmins, Ontario.	March 31st, 1962	Re-issue
716/61 Feb. 28/61	Pt. McArthur Twp.	A. E. Wicks Ltd., Cochrane, Ontario.	March 31st, 1964	Re-issue
716/61 Feb. 28/61	Pt. Langmuir Twp.	Feldman Timber Co. Ltd., Timmins, Ontario.	March 31st, 1963	Re-issue

Order-in-Council Date	Description of Area	Name of Licensee	Expiry Date	Notice of Transaction
716/61 Feb. 28/61	W ¹ / ₂ Denton Twp.	Feldman Timber Co. Ltd., Timmins, Ontario.	March 31st, 1963	Re-issue
716/61 Feb. 28/61	Pt. Godfrey Twp.	Feldman Timber Co. Ltd., Timmins, Ontario.	March 31st, 1962	Re-issue
716/61 Feb. 28/61	Bartlett, Ciekie, Beemer etc.	A.E. Wicks Ltd., Cochrane, Ontario.	March 31st, 1964	Re-issue
716/61 Feb. 28/61	E ¹ / ₂ Timmins Twp.	A.E. Wicks Ltd., Cochrane, Ontario.	March 31st, 1961	Re-issue
653/61 Feb. 22/61	Parcel 1, St. Ignace Is.	Great Lakes Lbr. & Shipping Ltd., P.O. Box 158, Fort William, Ontario.	March 31st, 1965	Re-issue
716/61 Feb. 28/61	Pt. Little Twp.	Feldman Timber Co. Ltd., Timmins, Ontario.	March 31st, 1963	Re-issue
862/61 Mar. 31/61	Part Umback Twp.	Paul Gausdi, 925 Kildonan Dr., E.K., Winnipeg 5, Manitoba.	March 31st, 1967	New transaction
987/61 Mar. 24/61	Pts. Sharpe & Truax Twp.	Wm. Pollock and Son Ltd., Englehart, Ontario.	March 31st, 1963	New transaction
716/61 Feb. 28/61	Halliday Twp.	Feldman Timber Co. Ltd., Timmins, Ontario.	March 31st, 1964	Re-issue
874/61 Mar. 24/61	Part Newton Twp.	Algoma-Davis Timber Ltd., 10 St. Mary St., Toronto, Ontario.	March 31st, 1962	New transaction
928/61 Mar. 27/61	Part Ballantyne Twp.	Edgar C. White Co. Ltd., South River, Ontario.	March 31st, 1962	New transaction
861/61 Mar. 24/61	Parts Lavant Twp.	M. J. Umpherson, Clyde Forks, Ontario.	March 31st, 1965	New transaction

WHITE AND RED PINE SAWLOG TIMBER CUT ON CROWN LANDS



PULPWOOD TIMBER—ALL SPECIES CUT ON CROWN LAND



Summary of Volume and Value of Timber Cut During Period April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
Board Foot Measure							
Ontario Scale-Sawlogs							
Ash	4,020		244,020	45,611.22	1,221.29	720.15	1,941.44
Balsam	45,899		928,797	175,606.89	3,772.20	3,811.73	7,583.93
Basswood	33,116		1,939,976	362,612.34	9,716.56	11,964.77	21,681.33
Beech	12,477		173,844	144,643.74	1,161.20	2,375.31	3,536.51
Birch, white	50,518		2,337,251	436,869.34	3,886.59	8,788.60	12,615.19
Birch, yellow	444,567		39,556,659	7,393,768.04	197,784.36	373,718.86	571,503.22
Butternut	108		5,909	1,104.49	9.36	35.25	44.61
Cedar	9,804		204,787	30,266.74	621.81	1,074.59	1,696.40
Cherry	1,938		141,840	26,512.14	709.25	153.37	868.62
Elm	10,289		1,032,332	192,959.25	5,162.93	2,739.96	7,902.89
Hemlock	297,481		19,947,569	3,728,517.58	59,850.68	33,499.19	93,349.87
Maple	295,076		24,601,019	4,598,321.31	123,018.46	60,076.14	183,094.60
Oak	14,771		830,131	155,175.80	4,233.54	2,879.04	7,112.58
Pine, jack	2,419,125		63,489,284	11,868,266.17	253,980.85	136,059.04	390,039.89
Pine, red	372,844		26,154,499	4,888,691.41	131,102.76	120,283.86	251,386.62
Pine, white	1,316,246		116,721,220	21,817,050.48	585,759.29	655,094.52	1,240,853.81
Poplar	261,588		10,295,539	1,924,399.81	15,674.08	16,620.41	32,294.49
Spruce	1,382,261		36,123,534	6,765,165.28	133,876.62	97,506.39	231,383.01
Tamarack	2,068		51,221	3,630.08	154.56	192.54	247.10
Total Ontario scale	6,976,196		245,557,171	64,571,172.16	1,521,696.39	1,527,532.72	3,059,230.11
Moyle Scale-Sawlogs							
Pine, red	5,597		322,702	80,675.50	1,613.52	1,541.78	3,155.30
Pine, white	2,081		150,284	37,371.00	751.44	1,492.50	1,500.90
Total Moyle scale	6,678		472,986	118,046.50	2,364.96	2,291.28	4,656.24
Cubic Foot Measure							
Sawlogs							
Ash	21		238.13	238.13	1.42	.96	2.38
Balsam	208,795		866,445.25	866,445.25	14,278.31	8,914.02	23,192.33
Birch, white	2,270		44,375.28	44,375.28	263.48	177.72	441.20
Cedar	2,278		24,836.33	24,836.33	415.83	32.29	448.12
Pine, jack	2,233,488		11,792,654.77	11,792,654.77	277,185.78	112,617.66	389,803.44
Pine, red	62,273		645,501.15	21,165.40	13,299.64	18,565.04	36,864.68
Pine, white	28,013		299,563.80	9,714.40	6,297.73	16,312.13	25,192.86
Poplar	258,250		1,779,101.75	1,779,101.75	10,566.27	11,443.26	22,009.53
Spruce	2,585,168		13,341,628.31	13,341,628.31	439,979.68	119,627.32	559,607.00
Tamarack	76		494.95	494.95	8.16	12.58	20.74
Total sawlogs (cubic measure)	5,595,634		28,794,840.40	28,794,840.40	773,278.73	272,823.18	1,046,401.91
Booms, Piling, Poles							
Booms and Dimension Timber							
Balsam	533		1,128.18	1,128.18	37.40	17.37	54.77
Cedar	1,506		21,926.71	21,926.71	377.34	25.32	402.66
Elm	02		9.24	9.24	.28	.18	.46
Hemlock	386		9,298.22	9,298.22	470.59	41.18	511.77
Maple	02		10.41	10.41	.31	.21	.52
Pine, jack	3,600		17,741.05	17,741.05	602.19	286.52	888.71
Pine, red	1,585		53,708.22	53,708.22	2,523.45	2,462.50	4,985.95
Pine, white	953		28,277.29	28,277.29	1,568.34	1,375.99	1,944.33
Poplar	03		107.47	107.47	6.45	6.45	6.45
Spruce	21,073		381,844.22	381,844.22	17,497.87	1,736.27	19,234.14
Tamarack	585		1,203.84	1,203.84	36.44	36.44	36.44
Piling							
Ash	03		72.04	72.04	3.60		3.60
Balsam	17		132.69	132.69	5.31	2.42	7.73
Basswood	04		80.94	80.94	3.88		3.88
Beech	25		595.66	595.66	29.70		29.70
Birch, white	03		67.94	67.94	3.40		3.40
Cedar	182		548.78	548.78	17.07	7.28	24.35
Elm	237		1,964.78	1,964.78	61.09	35.75	96.84
Hemlock	1,221		24,825.76	24,825.76	1,135.70		1,135.70
Maple	16		325.32	325.32	199.75		199.75
Oak	03		62.57	62.57	2.93		2.93
Pine, jack	1,590		41,513.85	41,513.85	2,166.19		2,166.19
Pine, red	3,371		68,350.79	68,350.79	3,128.34	683.51	3,811.85
Pine, white	3,266		68,840.73	68,840.73	3,211.19	688.43	3,899.62
Poplar	431		9,463.71	9,463.71	450.97		450.97
Spruce	16,186		456,138.32	456,138.32	24,635.21	700.14	25,335.35
Tamarack	264		919.74	919.74	36.03	3.83	39.86
Poles							
Balsam	70		483.57	483.57	14.51	9.67	24.18
Cedar	2,966		42,144.40	42,144.40	1,574.81	542.99	2,117.80
Hemlock	236		448.53	448.53	5.31		5.31
Pine, jack	125,209		1,855,895.61	1,855,895.61	78,913.65	20,125.99	99,039.64
Pine, red	17,435		369,787.61	369,787.61	18,171.28	16,743.26	34,914.54
Pine, white	740		10,571.31	10,571.31	442.76	27.76	470.52
Poplar	59		718.78	718.78	400.01	12.43	412.43
Spruce	943		24,939.53	24,939.53	1,059.72	573.40	1,633.12
Total booms, piling, poles	204,705		3,498,697.64	3,498,697.64	158,676.93	44,826.14	203,507.07
Total cubic foot measure	5,590,229		28,293,538.04	28,293,538.04	922,255.66	217,649.32	1,249,904.98
Cordage							
Fullwood							
Ash		437.89		37,220.65	218.94	118.61	337.55
Balsam		140,897.96		11,976,326.60	197,009.84	47,707.41	244,717.25
Balsam (export levy)		(5,700.11)		(484,509.35)		5,700.11	5,700.11
Basswood		23.50		1,937.70	11.75	11.75	23.50
Beech		1,508.68		128,237.80	754.34	339.06	1,093.40
Birch, white		10,214.72		868,251.20	5,107.43	5,435.41	10,542.84
Birch, yellow		41.42		3,520.70	20.71	10.36	31.07
Cedar		41.26		3,507.10	57.76	4.63	62.39
Elm		718.78		61,026.30	359.39	541.64	541.64
Maple		2,963.04		251,858.40	1,481.54	1,135.11	2,616.65
Oak		250.28		21,273.80	125.14	62.57	187.71
Pine, jack		618,844.99		52,601,824.15	1,236,601.59	72,742.46	1,309,344.05
Pine, jack (export levy)		(58,920.21)		(5,003,787.85)		29,463.48	29,463.48
Pine, red		1,629		79,796.40	1,314.32	113.54	1,427.86
Pine, white		448.53		38,125.05	627.93	219.47	847.40
Poplar		172,233.60		14,639,856.00	86,117.06	43,995.90	130,112.96
Poplar (export levy)		(6,679.75)		(567,778.75)		667.98	667.98
Spruce		1,950,184.71		165,765,700.35	5,459,261.72	652,634.05	6,111,895.77
Spruce (export levy)		(71,351.78)		(6,064,901.30)		71,351.78	71,351.78
Tamarack		164.14		13,951.90	229.78	71.38	301.16
Tamarack (export levy)		(1.92)		(163.20)		1.92	1.92
Total fullwood		2,894,912.28		246,492,543.80	8,299,297.24	931,969.23	7,921,268.47
Fuelwood							
Fuelwood		14,344.13		1,219,251.05	7,453.85	2,296.80	9,750.65
Softwood		17,943.93		1,525,234.05	9,091.71	1,479.91	10,571.62
Total Fuelwood		32,288.06		2,744,485.10	16,545.56	3,776.71	20,322.27
Bolts							
Birch, white		900.26		76,522.10	450.15	305.83	755.98
Cedar		.16		13.60	.22	.02	.24
Poplar		16,075.75		1,356,438.75	8,037.91	3,801.37	11,839.28
Total bolts		16,976.17		1,442,974.45	8,488.28	4,107.22	12,595.50
Total cordage		2,949,176.51		250,680,003.35	7,014,333.08	939,853.16	7,954,186.24
Miscellaneous							
Posts - 1 in. ft.							
Balsam - "	7,418		65,167	32,583.00	651.67	383.44	1,035.11
Cedar - "	34,544		273,939	136,919.50	2,739.39	205.32	2,944.71
Pine, jack - "	1,629		10,950	5,475.00	109.50	69.00	178.50
Pine, red - "	02		20	10.00	.20		.20
Poplar - "	1,215		9,720	4,860.00	97.20	97.20	194.40
Spruce - "	670		7,616	3,808.00	76.16	15.80	91.96
Tamarack - "	44		350	175.00	3.50		3.50
Car-Stakes							
Birch, white, cu. ft.	100		204.00	204.00	1.20	.40	1.60
Pine, jack "	900		1,224.00	1,224.00	28.80	1.44	30.24
Pine, red "	1,410		1,917.60	1,917.60	31.58		31.58
Spruce "	668		803.00	803.00	29.27	2.51	31.78
Tie-Blocks							
Pine, jack	10,222		53,620.68	53,620.68	1,261.41	176.57	1,437.98
Mining Timber							
Pine, jack	598		4,306.30	4,306.30	160.74	83.12	243.86
Poplar	11,179		47,881.05	47,881.05	249.11	12.93	262.04
Spruce	104,396		179,912.09	179,912.09	6,610.24	611.65	7,221.89
Tamarack	87		90.55	90.55	1.50	.37	1.87
Christmas trees	6,129		3,064.50	3,064.50	277.14		277.14
Total miscellaneous	181,211		-	476,854.27	12,428.61	1,599.75	14,688.36
Total Ontario scale	6,976,196		245,557,171	64,571,172.16	1,521,696.39	1,527,532.72	3,059,230.11
Total Moyle scale	6,678		472,986	118,046.50	2,364.96	2,291.28	4,656.24
Total cubic foot measure	5,590,229		28,293,538.04	28,293,538.04	922,255.66	217,649.32	1,249,904.98
Total cordage		2,949,176.51		250,680,003.35	7,014,333.08	939,853.16	7,954,186.24
Grand total	12,756,224	2,949,176.51	-	248,129,814.32	9,299,076.70	2,768,987.25	12,882,065.99

Chapleau

Summary of Volume and Value of Timber Cut During Period April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
<u>Board Foot Measure</u>							
<u>Ontario Scale</u>							
Pine, jack	65,760		2,551,497	476,915.32	10,205.99	1,275.75	11,481.74
Pine, red	342		30,710	5,740.19	153.55	138.20	291.75
Pine, white	49,148		4,384,880	819,603.74	21,924.42	19,779.95	41,704.37
Total Ontario scale	115,250		6,967,087	1,302,259.25	32,283.96	21,193.90	53,477.86
<u>Cubic Foot Measure</u>							
<u>Sawlogs</u>							
Balsam	3,080		16,760.04	16,760.04	276.54	58.65	335.19
Birch, white	1,297		7,716.76	7,716.76	46.30	46.30	92.60
Pine, jack	606,544		4,052,578.00	4,052,578.00	95,261.23	14,607.15	109,868.38
Poplar	627		7,192.54	7,192.54	43.16	43.15	86.31
Spruce	449,692		2,399,443.81	2,399,443.81	79,173.75	9,054.70	88,228.45
Total sawlogs	1,061,240		6,483,691.15	6,483,691.15	174,800.98	23,809.95	198,610.93
<u>Boom Timber, Piling, Poles</u>							
<u>Boom and Dimension Timber</u>							
Pine, red	35		1,414.44	1,414.44	82.44	14.14	96.58
Spruce	321		4,883.76	4,883.76	229.67	48.83	278.50
Poles							
Cedar	10		100.00	100.00	5.00		5.00
Pine, jack	3,095		39,921.07	39,921.07	1,606.05	26.13	1,632.18
Spruce	94		394.82	394.82	11.84	3.95	15.79
Total boom timber, piling, poles	3,555		46,714.09	46,714.09	1,935.00	93.05	2,028.05
Total cubic foot measure	1,064,795		6,530,405.24	6,530,405.24	176,735.98	23,903.00	200,638.98
<u>Cordage</u>							
<u>Pulpwood</u>							
Balsam		824.20		70,057.00	1,153.88	20.00	1,173.88
Pine, jack		85,239.75		7,245,378.75	170,479.50	4,582.11	175,061.61
Poplar		19,657.73		1,670,907.05	9,828.88	2,475.98	12,304.86
Spruce		13,939.57		1,184,863.45	39,030.80	2,101.33	41,132.13
Total pulpwood		119,661.25		10,171,206.25	220,493.06	9,179.42	229,672.48
<u>Fuelwood</u>							
Hardwood		634.15		53,902.75	317.08	317.07	634.15
Softwood		1,587.01		134,895.85	793.50	793.51	1,587.01
Total fuelwood		2,221.16		188,798.60	1,110.58	1,110.58	2,221.16
Total cordage		121,882.41		10,360,004.85	221,603.64	10,290.00	231,893.64
<u>Miscellaneous</u>							
<u>Posts</u>							
Cedar - lin. ft.	25		200	100.00	2.00	3.00	5.00
Total miscellaneous	25		200	100.00	2.00	3.00	5.00
Total Ontario scale	115,250		6,967,087	1,302,259.25	32,283.96	21,193.90	53,477.86
Total cubic foot measure	1,064,795		6,530,405.24	6,530,405.24	176,735.98	23,903.00	200,638.98
Total cordage		121,882.41		10,360,004.85	221,603.64	10,290.00	231,893.64
Grand total	1,180,070	121,882.41	-	18,192,769.34	430,625.58	55,389.90	486,015.48

Number of permits issued and included in above -

Conversion factor - Ontario scale to cubic foot measure -

Conversion factor - cordage to cubic foot measure -

148

5.35

85.

11,041.77

COCHRANE

Summary of Volume and Value of Timber Cut During Period April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
<u>Board Foot Measure</u>							
<u>Ontario Scale</u>							
Balsam	394		5,631	1,052.52	22.53	16.89	39.42
Birch, white	1,827		61,826	11,556.26	92.74	92.74	185.48
Pine, jack	219,385		4,698,094	878,148.41	18,792.37	11,262.14	30,054.51
Pine, red	111		11,767	2,199.44	58.84	47.07	105.91
Pine, white	855		78,584	14,688.60	392.93	373.28	766.21
Poplar	4,890		185,934	34,754.02	278.90	278.90	557.80
Spruce	85,307		1,730,177	323,397.57	6,920.71	5,060.59	11,981.30
Total Ontario scale	312,769		6,772,013	1,265,796.82	26,559.02	17,131.61	43,690.62
<u>Cubic Foot Measure</u>							
<u>Sawlogs</u>							
Balsam	41		164.25	164.25	2.71	3.81	6.52
Pine, jack	9,805		73,179.69	73,179.69	1,719.72	573.15	2,292.87
Poplar	10,370		91,460.61	91,460.61	539.10	189.74	728.84
Spruce	17,309		132,332.12	132,332.12	4,366.96	807.77	5,174.73
Total sawlogs (cubic)	37,525		297,136.67	297,136.67	6,628.49	1,574.47	8,202.96
<u>Boom Timber, Piling, Poles</u>							
<u>Boom and Dimension Timber</u>							
Spruce	1,336		48,524.97	48,524.97	2,320.17	185.38	2,505.55
Tamarack	15		123.21	123.21	4.02		4.02
Poles							
Cedar	21		467.97	467.97	17.33	4.68	22.01
Total boom timber, piling, poles	1,372		49,116.15	49,116.15	2,341.52	190.06	2,531.58
Total cubic foot measure	38,897		346,252.82	346,252.82	8,970.01	1,764.53	10,734.54
<u>Cordage</u>							
<u>Pulpwood</u>							
Balsam		26,610.93		2,261,929.05	37,255.29	4,179.84	41,435.11
Pine, jack		28,404.24		2,414,360.40	56,808.48	2,897.80	59,706.28
Poplar		2,253.36		191,535.60	1,126.69	710.82	1,837.51
Spruce		329,432.19		28,001,736.15	922,410.13	153,869.72	1,076,279.88
Tamarack		2.56		217.60	3.58	.26	3.84
Total pulpwood		386,703.28		32,869,778.80	1,017,604.17	161,658.44	1,179,262.61
<u>Fuelwood</u>							
Hardwood		1,028.60		87,431.00	514.32	271.65	785.97
Softwood		3,169.50		269,407.50	1,584.75	66.06	1,650.81
Total fuelwood		4,198.10		356,838.50	2,099.07	337.71	2,436.78
<u>Bolts</u>							
Poplar		1,264.15		107,452.75	632.08	632.08	1,264.15
Total bolts		1,264.15		107,452.75	632.08	632.08	1,264.15
Total cordage		392,165.53		33,334,070.05	1,020,335.32	162,628.23	1,182,963.54
<u>Miscellaneous</u>							
<u>Posts</u>							
Cedar - 1in. ft.	1,216		8,353	4,176.50	83.53		83.53
<u>Mining Timber</u>							
Poplar - cu. ft.	1,957		10,993.05	10,993.05	64.67	12.93	77.60
Spruce - cu. ft.	6,102		8,598.14	8,598.14	283.22	50.58	333.80
Tamarack - cu. ft.	87		90.55	90.55	1.50	.37	1.87
Christmas trees	215			107.50	8.60		8.60
Total miscellaneous	9,577			23,965.74	441.52	63.88	505.74
Total Ontario scale	312,769		6,772,013	1,265,796.82	26,559.02	17,131.61	43,690.62
Total cubic measure	38,897		346,252.82	346,252.82	8,970.01	1,764.53	10,734.54
Total cordage		392,165.53		33,334,070.05	1,020,335.32	162,628.23	1,182,963.54
Grand total	361,243	392,165.53		34,970,085.43	1,056,305.87	181,563.25	1,237,894.11

Number of permits issued and included in above -
 Conversion factor - Ontario scale to cubic foot measure
 Conversion factor - cordage to cubic foot measure

445
 5.35
 85.
 44,064.4

Fort Frances

Summary of Volume and Value of Timber Cut During Period April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
<u>Cubic Foot Measure</u>							
<u>Ontario Scale</u>							
Balsam	95		1,193	222.99	4.77	3.27	8.04
Birch, white	08		159	29.72	.24	.08	.32
Cedar	08		267	49.91	.80	.27	1.07
Pine, jack	121,881		3,459,386	646,614.21	13,837.54	658.88	14,496.42
Pine, red	2,685		114,615	21,423.36	573.08	450.59	1,023.67
Pine, white	1,688		179,588	33,567.85	897.96	691.16	1,589.12
Poplar	5,957		228,505	42,711.21	342.75		342.75
Spruce	120,795		2,473,404	462,318.50	9,893.61	3,710.35	13,603.96
Tamarack	04		61	11.40	.18	.18	.36
Total Ontario scale	253,121		6,457,178	1,206,949.15	25,550.93	5,514.78	31,065.71
<u>Doyle Rule</u>							
Pine, red	147		11,915	2,978.75	59.58	59.58	119.16
Pine, white	229		15,794	3,948.50	78.98	78.98	157.96
Total Doyle rule	376		27,709	6,927.25	138.56	138.56	277.12
<u>Cubic Foot Measure</u>							
<u>Sawlogs</u>							
Ash	21		238.13	238.13	1.42	.96	2.38
Balsam	93		930.88	930.88	15.36	27.85	43.21
Cedar	2,196		24,250.78	24,250.78	399.45	19.39	418.84
Pine, jack	17,295		84,847.37	84,847.37	1,996.21	213.93	2,210.14
Pine, red	339		6,503.32	6,503.32	214.61	188.75	403.36
Pine, white	630		12,074.22	12,074.22	398.45	299.94	698.39
Poplar	741		5,937.75	5,937.75	35.63	54.30	89.93
Spruce	187		1,659.35	1,659.35	54.76	27.96	82.72
Tamarack	12		94.42	94.42	1.55	3.17	4.72
Total sawlogs (cubic)	21,514		136,536.22	136,536.22	3,117.44	836.25	3,953.69
<u>Boom Timber, Piling, Poles</u>							
<u>Boom and Dimension Timber</u>							
Balsam	01		13.09	13.09	.52		.52
Pine, white	84		4,611.64	4,611.64	274.41		274.41
Spruce	503		14,639.71	14,639.71	801.70	.63	802.33
Poles							
Cedar	31		288.08	288.08	9.35		9.35
Pine, jack	349		6,217.29	6,217.29	276.31	6.75	283.06
Pine, red	25		801.00	801.00	44.12	2.92	47.04
Total booms, piling, poles	993		26,570.81	26,570.81	1,406.41	10.30	1,416.71
Total cubic foot measure	22,507		163,107.03	163,107.03	4,523.85	846.55	5,370.40
<u>Cordage</u>							
<u>Fuelwood</u>							
Balsam		4,438.51		377,273.35	6,213.92	920.37	7,134.29
Birch, white		185.20		15,742.00	92.60	18.52	111.12
Pine, jack		58,729.18		4,991,980.30	117,458.36	8,606.16	126,064.52
Pine, jack (export levy)		(48,090.16)		(4,087,663.60)		24,045.13	24,045.13
Poplar		24,782.55		2,106,516.75	12,391.29	3,954.87	16,346.16
Poplar (export levy)		(5,805.79)		(493,492.15)		580.58	580.58
Spruce		42,905.71		3,646,985.35	120,135.99	13,843.54	133,979.53
Total fuelwood		131,041.15		11,138,497.75	256,292.16	51,969.17	308,261.32
<u>Hardwood</u>		212.01		18,020.85	106.00	9.35	115.35
<u>Softwood</u>		278.53		23,675.05	139.26	8.01	147.27
Total fuelwood		490.54		41,695.90	245.26	17.36	262.62
Total cordage		131,531.69		11,180,193.65	256,537.42	51,986.53	308,523.95
<u>Miscellaneous</u>							
<u>Posts</u>							
Cedar - lin. ft.	2,443		18,446	9,223.00	184.46	33.04	217.50
Christmas trees	5,061			2,530.50	253.34		253.34
Total miscellaneous	7,504		18,446	11,753.50	437.80	33.04	470.84
Total Ontario scale	253,121		6,457,178	1,206,949.15	25,550.93	5,514.78	31,065.71
Total Doyle rule	376		27,709	6,927.25	138.56	138.56	277.12
Total cubic foot measure	22,507		163,107.03	163,107.03	4,523.85	846.55	5,370.40
Total cordage		131,531.69		11,180,193.65	256,537.42	51,986.53	308,523.95
Grand total	283,508	131,531.69	-	12,568,930.58	287,188.56	58,519.46	345,708.02

Number of permits issued and included in above -
 Conversion factor - Ontario scale to cubic foot measure -
 Conversion factor - cordage to cubic foot measure -

203 15,236.00
 5.35
 85

Geraldton

Summary of Volume and Value of Timber Cut During Period April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
<u>Cubic Foot Measure</u>							
Sawlogs							
Balsam	630		5,511.01	5,511.01	90.78	20.38	111
Birch, white	303		2,442.37	2,442.37	14.37		14
Cedar	04		88.00	88.00	1.45	2.95	
Pine, jack	28,720		273,472.71	273,472.71	6,434.67	326.32	6,760
Poplar	10,594		48,368.31	48,368.31	284.53	.03	284
Spruce	112,511		1,153,106.23	1,153,106.23	37,984.72	1,597.75	39,582
Total sawlogs (cubic)	152,762		1,482,988.65	1,482,988.65	44,810.52	1,947.43	46,757
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Balsam	430		460.73	460.73	7.57	2.33	9
Cedar	1,473		21,363.06	21,363.06	351.86	25.13	376
Pine, jack	2,297		5,921.18	5,921.18	139.32	4.78	144
Spruce	9,304		104,945.09	104,945.09	3,457.01	226.32	3,683
Poles							
Pine, jack	3,666		48,645.02	48,645.02	1,960.33	.72	1,961
Spruce	09		70.56	70.56	2.12	4.00	6
Piling							
Pine, jack	1,590		41,513.85	41,513.85	2,166.19		2,166
Spruce	8,001		247,692.71	247,692.71	13,696.59		13,696
Total boom timber, piling, poles	26,770		470,612.20	470,612.20	21,780.99	265.28	22,047
Total cubic foot measure	179,532		1,953,600.83	1,953,600.83	66,591.51	2,210.71	68,802
<u>Cordage</u>							
Pulpwood							
Balsam		39,699.92		3,374,493.20	55,579.96	10,999.71	66,579
Balsam (export levy)		(3,096.85)		(263,232.25)		3,096.85	3,096
Birch, white		669.72		56,926.20	334.87	6.93	341
Cedar		34.26		2,912.10	47.96	.43	48
Pine, jack		151,621.49		12,887,826.65	303,242.98	15,220.09	318,463
Pine, jack (export levy)		(3,925.28)		(333,648.80)		1,952.64	1,952
Poplar		53,696.34		4,564,188.90	26,848.19	15.03	26,863
Spruce		490,519.28		41,694,138.80	1,373,453.98	89,980.67	1,463,434
Spruce (export levy)		(6,387.93)		(542,974.05)		6,387.93	6,387
Tamarack		12.89		1,095.65	18.05	.55	10
Total pulpwood		736,253.90		62,581,581.50	1,759,525.99	127,670.63	1,887,196
Fuelwood							
Softwood		2,915.02		247,776.70	1,457.51	124.74	1,582
Total fuelwood		2,915.02		247,776.70	1,457.51	124.74	1,582
Bolts							
Birch, white		98.39		8,363.15	49.20		49
Poplar		6,080.61		516,851.85	3,040.31		3,040
Total bolts		6,179.00		525,215.00	3,089.51		3,089
Total cordage		745,347.92		63,354,573.20	1,764,073.01	127,795.57	1,891,368
<u>Miscellaneous</u>							
Posts - in. ft.							
Cedar	297		2,458	1,229.00	24.58	7.00	31
Car-Stakes - cu. ft.							
Spruce	268		403.00	403.00	13.27	2.51	15
Tie-Blocks - cu. ft.							
Pine, jack	9,039		45,321.46	45,321.46	1,066.38	122.63	1,199
Mining Timber - cu. ft.							
Pine, jack	12		374.02	374.02	20.83	3.75	24
Spruce	6,772		20,915.73	20,915.73	864.41	87.59	952
Total miscellaneous	16,388			68,243.21	1,989.47	223.40	2,212
Total cubic foot measure	179,532		1,953,600.83	1,953,600.83	66,591.51	2,210.71	68,802
Total cordage		745,347.92		63,354,573.20	1,764,073.01	127,795.57	1,891,368
Grand total	195,920	745,347.92		65,376,417.24	1,832,653.99	130,229.70	1,962,830

Number of permits issued and included in above -

Conversion factor - Ontario scale to cubic foot measure -

Conversion factor - cordage to cubic foot measure -

244 6,647

5.35

85.

Gogama

Summary of Volume and Value of Timber Cut During Period from April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
					\$	\$	\$
<u>Board Foot Measure</u>							
<u>Ontario Scale</u>							
Balsam	06		192	35.89	.77	.58	1.35
Birch, white	744		28,224	5,275.51	42.34	42.34	84.68
Pine, jack	939,331		24,472,666	4,574,330.09	97,890.66	48,222.06	146,112.72
Pine, red	2,247		197,099	36,840.93	985.51	786.48	1,771.99
Pine, white	37,793		4,010,793	749,680.93	20,053.99	19,272.29	39,326.28
Poplar	2,651		109,852	20,533.08	164.78	164.78	329.56
Spruce	210,500		4,343,520	811,872.90	17,374.08	12,286.23	29,660.31
Total Ontario scale	1,193,272		33,162,346	6,198,569.33	136,512.13	80,774.76	217,286.89
<u>Cubic Foot Measure</u>							
Sawlogs							
Pine, jack	88,012		236,537.56	236,537.56	5,515.08	268.18	5,783.26
Pine, white	1,532		28,532.74	28,532.74	770.38		770.38
Spruce	15,340		56,113.07	56,113.07	1,849.26	401.33	2,250.59
Total sawlogs	104,884		321,183.37	321,183.37	8,134.72	669.51	8,804.23
<u>Boom Timber, Piling, Poles</u>							
<u>Boom and Dimension Timber</u>							
Spruce	835		12,967.19	12,967.19	565.21	145.97	711.18
Poles							
Pine, jack	11,440		168,199.24	168,199.24	6,930.67	91.73	7,022.40
Spruce	26		831.07	831.07	46.26		46.26
Total boom timber, piling, poles	12,301		181,997.50	181,997.50	7,542.14	237.70	7,779.84
Total cubic foot measure	117,185		503,180.87	503,180.87	15,676.86	907.21	16,584.07
<u>Cordage</u>							
<u>Pulpwood</u>							
Balsam		502.68		42,727.80	703.76	241.74	945.50
Pine, jack		51,263.99		4,357,439.15	101,443.10	1,005.22	102,448.32
Poplar		6.89		585.65	3.45		3.45
Spruce		37,448.40		3,183,114.00	103,555.74	15,129.16	118,684.90
Total pulpwood		89,221.96		7,583,866.60	206,706.05	16,376.12	222,082.17
<u>Fuelwood</u>							
Hardwood		64.00		5,440.00	32.00	47.00	79.00
Softwood		810.00		68,850.00	524.75	168.50	693.25
Total fuelwood		874.00		74,290.00	556.75	215.50	772.25
Total cordage		90,095.96		7,658,156.60	206,262.80	16,591.62	222,854.42
<u>Miscellaneous</u>							
<u>Car-Stakes</u>							
Spruce - cu. ft.	400		400.00	400.00	16.00		16.00
Total miscellaneous	400		400.00	400.00	16.00		16.00
Total Ontario scale	1,193,272		33,162,346	6,198,569.33	136,512.13	80,774.76	217,286.89
Total cubic foot measure	117,185		503,180.87	503,180.87	15,676.86	907.21	16,584.07
Total cordage		90,095.96	-	7,658,156.60	206,262.80	16,591.62	222,854.42
Grand total	1,310,857	90,095.96	-	14,360,306.80	358,467.79	98,273.59	456,741.38

Number of permits issued and included in above -
 Conversion factor - Ontario scale to cubic foot measure -
 Conversion factor - cordage to cubic foot measure -

67
 5.35
 85
 498.00

Kapuskasing

Summary of Volume and Value of Timber Cut During Period From April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Val.
<u>Board Foot Measure</u>							
Ontario Scale							
Balsam	13,755		250,415	46,806.54	1,001.66	628.81	1,630.
Pine, jack	57		2,763	516.45	11.05	7.56	18.
Poplar	91		8,487	1,586.36	12.73	9.76	22.
Spruce	219,214		3,465,137	647,689.16	13,860.55	10,067.38	23,927.
Tamarack	266		7,158	1,337.94	21.47		21.
Total Ontario scale	233,383		3,733,960	697,936.45	14,907.46	10,713.51	25,620.
<u>Cubic Foot Measure</u>							
Sawlogs							
Balsam	48,876		233,187.25	233,187.25	3,845.28	3,215.58	7,060.
Birch, white	150		884.65	884.65	5.22	6.18	11.
Pine, jack	186,388		1,134,789.27	1,134,789.27	26,672.17	18,233.25	44,905.
Pine, red	08		185.10	185.10	6.11	2.59	8.
Poplar	17,068		104,867.67	104,867.67	622.62	629.82	1,252.
Spruce	1,049,356		5,098,984.92	5,098,984.92	168,218.81	65,086.41	233,305.
Total sawlogs	1,301,846		6,572,898.86	6,572,898.86	199,370.21	87,173.83	286,544.
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Poplar	03		107.47	107.47	6.45		6.
Spruce	1,138		26,034.84	26,034.84	1,316.61	10.09	1,326.
Piling							
Spruce	3,413		99,169.07	99,169.07	5,392.76		5,392.
Poles							
Cedar	125		1,063.54	1,063.54	32.89		32.
Total boom timber, piling, poles	4,679		126,374.92	126,374.92	6,748.71	10.09	6,758.
Total cubic measure	1,306,525		6,699,273.78	6,699,273.78	206,118.92	87,183.92	293,302.
<u>Cordage</u>							
Pulpwood							
Balsam		21,132.70		1,796,279.50	29,585.96	11,978.30	41,564.
Balsam (export levy)		(2,329.04)		(197,968.40)		2,329.04	2,329.
Birch, white		.35		29.75	.18	.16	
Pine, jack		1,720.94		146,279.90	3,441.88	700.72	4,142.
Pine, jack (export levy)		(.41)		(34.85)		.21	
Poplar		8,623.82		733,024.70	4,311.92	3,321.73	7,633.
Spruce		415,573.12		35,323,715.20	1,163,638.93	191,057.90	1,354,696.
Spruce (export levy)		(41,622.61)		(3,537,921.85)		41,622.61	41,622.
Tamarack		.82		69.70	1.14	1.35	2.
Total pulpwood		447,051.75		37,999,398.75	1,200,980.01	251,012.02	1,451,992.
Fuelwood							
Hardwood		1,345.54		114,370.90	672.77		672.
Softwood		1,920.06		163,205.10	960.03		960.
Total fuelwood		3,265.60		277,576.00	1,632.80		1,632.
Total cordage		450,317.35		38,276,974.75	1,202,612.81	251,012.02	1,453,624.
<u>Miscellaneous</u>							
Posts							
Cedar - 1in. ft.	6,484		46,126	23,063.00	461.26		461.26
Total miscellaneous	6,484		46,126	23,063.00	461.26		461.26
Total Ontario scale	233,383		3,733,960	697,936.45	14,907.46	10,713.51	25,620.
Total cubic measure	1,306,525		6,699,273.78	6,699,273.78	206,118.92	87,183.92	293,302.
Total cordage		450,317.35		38,276,974.75	1,202,612.81	251,012.02	1,453,624.
Grand total	1,546,392	450,317.35	—	45,697,247.98	1,424,100.45	348,909.45	1,773,009.

Number of permits issued and included in above -

Conversion factor - Ontario scale to cubic foot measure -

Conversion factor - cordage to cubic foot measure -

989

5.35

85

247,937.2

Kenora

Summary of Volume and Value of Timber Cut During Period from April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues \$	Bonus \$	Value
<u>Board Foot Measure</u>							
<u>Ontario Scale</u>							
Pine, red	1,474		73,668	13,769.72	368.35	685.55	1,053.90
Pine, white	6,452		378,132	70,678.88	1,890.67	3,151.16	5,041.83
Spruce	5,279		3,084,648	576,569.72	1,346.35	654.84	2,001.19
Total Ontario scale	13,205		3,536,448	661,018.32	3,605.37	4,491.55	8,096.92
<u>Doyle Scale</u>							
Pine, red	3,359		213,975	53,493.75	1,069.88	998.14	2,068.02
Pine, white	90		2,416	604.00	12.09	10.15	22.24
Total Doyle scale	3,449		216,391	54,097.75	1,081.97	1,008.29	2,090.26
<u>Cubic Foot Measure</u>							
<u>Sawlogs</u>							
Balsam	252		1,324.45	1,324.45	21.85	26.12	47.97
Pine, jack	92,149		466,426.99	466,426.99	10,961.06	9,516.79	20,477.85
Pine, red	7,026		79,109.10	79,109.10	2,610.60	3,136.08	5,746.68
Pine, white	3,076		33,541.46	33,541.46	1,106.87	1,052.94	2,159.81
Poplar	6,353		34,278.84	34,278.84	205.66	182.33	387.99
Spruce	24,640		154,039.49	154,009.49	5,082.31	2,752.21	7,834.52
Total sawlogs	133,496		768,690.33	768,690.33	19,988.35	16,666.47	36,654.82
<u>Boom Timber, Piling, Poles</u>							
<u>Boom and Dimension Timber</u>							
Pine, white	32		1,177.44	1,177.44	68.51	23.54	92.05
Spruce	1,568		46,544.77	46,544.77	2,533.78	183.79	2,717.57
<u>Poles</u>							
Balsam	70		483.57	483.57	14.51	9.67	24.18
Cedar	589		7,643.62	7,643.62	231.62	152.88	384.50
Pine, jack	3,464		43,474.47	43,474.47	1,582.07	731.79	2,313.86
Pine, red	494		9,396.40	9,396.40	445.30	170.45	615.75
Pine, white	10		225.00	225.00	6.75	4.50	11.25
Poplar	58		378.36	378.36	11.35	7.57	18.92
Spruce	295		10,541.63	10,541.63	337.81	202.87	540.68
Total boom timber, piling, poles	6,580		119,865.26	119,865.26	5,231.70	1,487.06	6,718.76
Total cubic measure	140,076		888,555.59	888,555.59	25,220.05	18,153.53	43,373.58
<u>Cordage</u>							
<u>Pulpwood</u>							
Balsam		5,098.34		433,358.90	6,957.82	2,506.75	9,464.57
Pine, jack		113,433.25		9,641,826.25	226,863.90	22,073.28	248,937.18
Poplar		4,177.54		355,090.90	2,088.82	2,964.30	5,053.12
Spruce		166,209.92		14,127,843.20	465,394.55	49,369.37	514,763.92
Total pulpwood		289,919.05		24,558,119.25	701,305.09	76,913.70	778,218.79
<u>Fuelwood</u>							
Hardwood		116.30		9,885.50	58.15	29.08	87.23
Softwood		440.87		37,473.95	220.43	110.22	330.65
Total fuelwood		557.17		47,359.45	278.58	139.30	417.88
Total cordage		289,476.22		24,605,478.70	701,583.67	77,053.00	778,636.67
<u>Miscellaneous</u>							
<u>Posts</u>							
Cedar - lin. ft.	18,946		157,314	78,657.00	1,573.14		1,573.14
Pine, jack - lin. ft.	587		4,330	2,165.00	43.30		43.30
Spruce - lin. ft.	100		800	400.00	8.00		8.00
Tamarack - lin. ft.	44		350	175.00	3.50		3.50
Christmas trees	425			212.50	51.00		51.00
Total miscellaneous	20,102		162,794	81,609.50	1,678.94		1,678.94
Total Ontario scale	13,205		3,536,448	661,018.32	3,605.37	4,491.55	8,096.92
Total Doyle scale	3,449		216,391	54,097.75	1,081.97	1,008.29	2,090.26
Total cubic measure	140,076		888,555.59	888,555.59	25,220.05	18,153.53	43,373.58
Total cordage	-	289,476.22	-	24,605,478.70	701,583.67	77,053.00	778,636.67
Grand total	176,832	289,476.22	-	26,290,759.86	733,170.00	100,706.37	833,876.37

Number of permits issued and included in above -
 Conversion factor - Ontario scale to cubic foot measure
 Conversion factor - cordage to cubic foot measure -

363
 5.35
 85.

105,885.68

Lindsay

Summary of Volume and Value of Timber Cut During Period April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Val
Board Foot Measure							
<u>Ontario Scale</u>							
Ash	261		16,550	3,093.46	82.77	40.33	123.
Balsam	1,720		42,763	7,993.08	171.05	149.62	320.
Basswood	3,984		249,192	46,577.94	1,245.99	1,025.99	2,271.
Beech	1,592		134,830	25,201.87	202.24	451.08	653.
Birch, white	1,375		52,257	9,767.66	78.38	188.31	266.
Birch, yellow	15,106		1,424,693	266,297.76	7,123.49	9,854.55	16,978.
Cedar	664		20,358	3,805.23	61.08	36.03	97.
Cherry	294		24,315	4,544.86	121.58	24.31	145.
Elm	1,366		156,184	29,193.27	780.95	378.95	1,159.
Hemlock	44,133		2,546,892	476,054.58	7,640.68	2,234.70	9,875.
Maple	33,110		3,197,987	597,754.58	15,989.96	5,860.54	21,850.
Oak	1,628		87,401	16,336.64	437.02	272.08	709.
Pine, red	5,746		232,969	43,545.61	1,164.86	4,557.10	5,721.
Pine, white	15,470		1,028,274	192,200.75	5,141.41	8,927.36	14,068.
Poplar	3,179		146,535	27,389.72	219.80	684.96	904.
Spruce	5,052		288,269	53,882.06	1,135.58	1,132.98	2,268.
Tamarack	21		634	118.50	1.90	3.17	5.
Total Ontario scale	134,701		9,650,103	1,803,757.57	41,598.74	35,822.06	77,420.
Cubic Foot Measure							
<u>Boom Timber, Piling, Poles</u>							
<u>Boom and Dimension Timber</u>							
Hemlock	39		612.88	612.88	25.35		25.
Poles							
Hemlock	04		212.01	212.01	12.72		12.
Total boom timber, piling, poles	43		824.89	824.89	38.07		38.
Total cubic foot measure	43		824.89	824.89	38.07		38.
Cordage							
<u>Pulpwood</u>							
Balsam		20.74		1,762.90	29.04	12.44	41.
Beech		234.74		19,952.90	117.37	58.69	176.
Birch, white		234.74		19,952.90	117.37	58.69	176.
Elm		178.42		15,165.70	89.21	44.59	133.
Maple		689.00		58,565.00	344.50	125.53	470.
Poplar		2,222.43		188,906.55	1,111.22	485.50	1,596.
Total pulpwood		3,580.07		304,305.95	1,808.71	785.44	2,594.
<u>Fuelwood</u>							
Hardwood		340.98		28,983.30	170.49	29.62	200.
Total fuelwood		340.98		28,983.30	170.49	29.62	200.
Total cordage		3,921.05		333,289.25	1,979.20	815.06	2,794.
Miscellaneous							
<u>Posts</u>							
Cedar - 1 in. ft.	590		4,720	2,360.00	47.20		47.
Total miscellaneous	590		4,720	2,360.00	47.20		47.
Total Ontario scale	134,701		9,650,103	1,803,757.57	41,598.74	35,822.06	77,420.
Total cubic foot measure	43		824.89	824.89	38.07		38.
Total cordage	-	3,921.05		333,289.25	1,979.20	815.06	2,794.
Grand total	135,234	3,921.05	--	2,140,231.71	43,663.21	36,637.12	80,300.

Number of permits issued and included in above -

Conversion factor - Ontario scale to cubic foot measure -

Conversion factor - cordage to cubic foot measure -

50

5.35

85

13,828.0

Maple

Summary of Volume and Value of Timber Cut During Period April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
<u>Ord Foot Measure</u>					\$	\$	\$
<u>Ontario Scale</u>							
Basswood	79		5,225	976.64	26.12	67.44	93.56
Birch, yellow	30		2,758	515.51	13.79	35.85	49.64
Elm	02		136	25.42	.68	.68	1.36
Maple	196		22,839	4,268.97	114.20	159.87	274.07
Oak	08		688	128.60	3.44	6.88	10.32
Pine, white	590		18,959	3,543.74	94.80	853.15	947.95
Poplar	45		2,730	510.28	4.10	12.28	16.38
Tamarack	48		764	142.80	2.29	5.25	7.64
<u>Total Ontario scale</u>	<u>998</u>		<u>54,099</u>	<u>10,111.96</u>	<u>259.42</u>	<u>1,141.50</u>	<u>1,400.92</u>
<u>Ord Foot Measure</u>							
<u>Boom Timber, Piling, Poles</u>							
Booms							
Pine, white	02		1.60	1.60	3.20	4.80	8.00
<u>Total boom timber, piling, poles</u>	<u>02</u>		<u>1.60</u>	<u>1.60</u>	<u>3.20</u>	<u>4.80</u>	<u>8.00</u>
<u>Total cubic foot measure</u>	<u>02</u>		<u>1.60</u>	<u>1.60</u>	<u>3.20</u>	<u>4.80</u>	<u>8.00</u>
<u>Ord Foot Measure</u>							
<u>Fuelwood</u>							
Hardwood		53.00		4,505.00	26.50	26.50	53.00
<u>Total fuelwood</u>		<u>53.00</u>		<u>4,505.00</u>	<u>26.50</u>	<u>26.50</u>	<u>53.00</u>
<u>Total cordage</u>		<u>53.00</u>		<u>4,505.00</u>	<u>26.50</u>	<u>26.50</u>	<u>53.00</u>
<u>Total Ontario scale</u>	<u>998</u>		<u>54,099</u>	<u>10,111.96</u>	<u>259.42</u>	<u>1,141.50</u>	<u>1,400.92</u>
<u>Total cubic foot measure</u>	<u>02</u>		<u>1.60</u>	<u>1.60</u>	<u>3.20</u>	<u>4.80</u>	<u>8.00</u>
<u>Grand total</u>	<u>1,000</u>	<u>53.00</u>	<u>-</u>	<u>14,618.56</u>	<u>289.12</u>	<u>1,172.80</u>	<u>1,461.92</u>

Number of permits issued and included in above -

Conversion factor - Ontario scale to cubic foot measure -

Conversion factor - cordage to cubic foot measure -

9
5.35
85.

492.27

North Bay

Summary of Volume and Value of Timber Cut During Period April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
<u>Board Foot Measure</u>							
<u>Ontario Scale</u>							
Ash	430		31,086	5,810.47	155.44	81.77	237.1
Balsam	1,600		48,839	9,128.78	195.35	145.75	341.1
Basswood	744		44,493	8,316.45	222.48	134.51	356.9
Beech	22		1,602	299.44	2.40	3.20	5.6
Birch, white	6,939		430,504	80,468.04	645.75	1,819.55	2,465.3
Birch, yellow	52,431		4,106,391	767,549.72	20,532.01	39,589.38	60,121.3
Cedar	887		9,968	1,863.18	29.89	22.17	52.0
Cherry	13		895	167.29	4.48	2.05	6.5
Elm	454		52,791	9,867.48	263.98	105.07	369.0
Hemlock	5,027		425,559	79,543.74	1,276.69	427.03	1,703.7
Maple	6,416		546,341	102,119.81	2,731.72	1,778.88	4,510.6
Oak	592		42,531	7,949.72	212.67	96.51	309.1
Pine, jack	18,190		481,641	90,026.36	1,926.56	1,800.64	3,727.2
Pine, red	127,224		10,835,832	2,025,389.16	54,179.21	43,491.46	97,670.6
Pine, white	481,762		48,430,411	9,052,413.27	242,152.15	252,523.35	494,675.5
Poplar	3,050		166,997	31,214.39	250.49	141.17	391.6
Spruce	46,908		2,331,511	435,796.45	9,326.07	8,411.27	17,737.3
Tamarack	188		3,931	734.77	11.79	32.22	44.0
Total Ontario scale	752,877		67,991,323	12,708,658.52	334,119.13	350,605.98	684,725.1
<u>Cubic Foot Measure</u>							
<u>Sawlogs</u>							
Pine, red	07		36.52	36.52	1.21	2.08	3.2
Pine, white	234		2,804.88	2,804.88	92.56	159.88	252.4
Total sawlogs (cubic)	241		2,841.40	2,841.40	93.77	161.96	255.7
<u>Boom Timber, Piling, Poles</u>							
<u>Booms</u>							
Hemlock	04		80.36	80.36	3.83		3.8
Pine, jack	325		2,138.91	2,138.91	85.48	59.95	145.4
Pine, red	733		31,786.71	31,786.71	1,393.52	822.28	2,215.8
Pine, white	246		2,412.21	2,412.21	106.88	64.28	171.1
Spruce	1,093		18,702.86	18,702.86	855.80	438.12	1,293.9
<u>Piling</u>							
Balsam	14		80.64	80.64	3.23	2.42	5.6
Tamarack	02		23.66	23.66	.95	.71	1.6
<u>Poles</u>							
Cedar	1,530		21,688.81	21,688.81	882.91	.20	883.1
Pine, jack	3,133		45,529.71	45,529.71	1,916.66	1,365.89	3,282.5
Pine, red	1,553		48,004.14	48,004.14	2,619.42	918.73	3,538.1
Pine, white	08		417.18	417.18	25.03	12.52	37.5
Spruce	01		16.84	16.84	.67	.51	1.1
Total boom timber, piling, poles	8,642		170,882.03	170,882.03	7,894.38	3,685.61	11,579.9
Total cubic measure	8,883		173,723.43	173,723.43	7,988.15	3,847.57	11,835.7
<u>Cordage</u>							
<u>Pulpwood</u>							
Ash		.27		22.95	.13	.14	.27
Balsam		319.34		27,143.90	447.08	149.06	596.1
Birch, white		4,251.64		361,389.40	2,125.83	2,968.73	5,094.5
Birch, yellow		41.42		3,520.70	20.71	10.36	31.0
Pine, jack		929.01		78,965.85	1,858.02	112.55	1,970.5
Pine, red		146.33		12,438.05	204.88	87.72	292.6
Pine, white		79.96		6,796.60	111.94	173.77	285.7
Poplar		22,947.68		1,950,552.80	11,473.85	16,075.83	27,549.6
Poplar (export levy)		(168.44)		(14,317.40)		16.84	16.8
Spruce		2,642.07		224,575.95	7,397.79	946.36	8,344.1
Tamarack		4.70		399.50	6.58	2.82	9.4
Total pulpwood		31,362.42		2,665,805.70	23,646.81	20,544.18	44,190.9
Fuelwood							
Hardwood		1,542.58		131,119.30	771.29	734.04	1,505.3
Total fuelwood		1,542.58		131,119.30	771.29	734.04	1,505.3
Total cordage		32,905.00		2,796,925.00	24,418.10	21,278.22	45,696.3
<u>Miscellaneous</u>							
<u>Posts</u>							
Balsam - lin. ft.	09		90	45.00	.90		.90
Cedar - lin. ft.	7,304		64,255	32,127.00	642.55	383.44	1,025.9
Pine, jack - lin. ft.	385		3,790	1,895.00	37.90	21.10	59.0
Pine, red - lin. ft.	02		20	10.00	.20		.20
Poplar - lin. ft.	1,215		9,720	4,860.00	97.20	97.20	194.4
Spruce - lin. ft.	570		6,816	3,408.00	68.16	15.80	83.96
<u>Mining Timber</u>							
Spruce - cu. ft.	1,009		1,412.70	1,412.70	46.54	3.32	49.86
Total miscellaneous	10,494		-	43,757.70	893.45	520.86	1,414.3
Total Ontario scale	752,877		67,991,323	12,708,658.52	334,119.13	350,605.98	684,725.1
Total cubic foot measure	8,883		173,723.43	173,723.43	7,988.15	3,847.57	11,835.7
Total cordage		32,905.00		2,796,925.00	24,418.10	21,278.22	45,696.3
Grand total	772,254	32,905.00	-	15,723,064.65	367,418.83	376,252.63	743,671.4

Number of permits issued and included in above -

420

44,440.29

Conversion factor - Ontario scale to cubic foot measure -

5.35

Conversion factor - cordage to cubic foot measure -

85.

Parry Sound

Summary of Volume and Value of Timber Cut During Period April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
<u>Board Foot Measure</u>							
<u>Ontario Scale</u>							
Ash	1,157		79,304	14,823.18	396.60	226.26	622.86
Balsam	1,146		25,997	4,859.25	103.98	42.11	146.09
Basswood	8,049		544,300	101,738.32	2,721.55	3,885.09	6,606.64
Beech	735		52,633	9,837.94	78.94	174.87	253.81
Birch, white	3,101		128,688	24,053.83	193.03	293.96	486.99
Birch, yellow	87,127		8,537,949	1,595,878.32	42,689.81	69,823.49	112,513.30
Cedar	101		2,997	560.19	9.01	2.96	11.97
Cherry	741		53,476	9,995.51	267.40	62.09	329.49
Elm	3,400		347,063	64,871.59	1,735.40	1,180.21	2,915.61
Hemlock	80,876		5,441,835	1,017,165.42	16,325.49	12,385.24	28,710.73
Maple	64,135		5,482,106	1,024,692.71	27,410.62	18,677.01	46,087.63
Oak	486		45,665	8,535.51	228.37	271.55	499.92
Pine, jack	9,918		144,939	27,091.40	579.76	466.91	1,046.67
Pine, red	456		22,351	4,177.76	111.76	155.63	267.39
Pine, white	14,025		1,630,208	304,711.78	8,151.12	10,301.16	18,452.28
Poplar	2,636		93,877	17,547.10	140.82	241.05	381.87
Spruce	13,741		775,221	144,901.12	3,100.88	3,601.78	6,702.66
Tamarack	109		2,249	420.37	6.75	4.50	11.25
Total Ontario scale	291,939		23,410,858	4,375,861.30	104,251.29	121,795.37	226,047.16
<u>Cubic Foot Measure</u>							
<u>Boom Timber, Piling, Poles</u>							
<u>Boom and Dimension Timber</u>							
Balsam	65		403.60	403.60	24.22		24.22
Pine, white	346		4,943.68	4,943.68	217.05	12.11	229.16
Spruce	588		14,578.84	14,578.84	791.57	23.45	815.02
<u>Piling</u>							
Maple	13		262.68	262.68	197.01		197.01
Tamarack	14		273.26	273.26	16.40		16.40
<u>Poles</u>							
Cedar	229		3,891.05	3,891.05	182.17		182.17
Hemlock	30		645.76	645.76	38.75		38.75
Pine, jack	328		922.16	922.16	55.33		55.33
Total boom timber, piling, poles	1,613		25,921.03	25,921.03	1,522.50	35.56	1,558.06
Total cubic foot measure	1,613		25,921.03	25,921.03	1,522.50	35.56	1,558.06
<u>Logage</u>							
<u>Pulpwood</u>							
Balsam		984.81		83,708.85	1,378.74	153.29	1,532.03
Birch, white		544.55		46,286.75	272.28	57.03	329.31
Maple		4.00		340.00	2.00	2.00	4.00
Pine, jack		103.19		8,771.15	206.38	66.89	273.27
Poplar		6,087.83		517,465.55	3,043.92	2,836.69	5,880.61
Spruce		626.45		53,248.25	1,754.76	699.81	2,454.57
Tamarack		2.50		212.50	3.50	.25	3.75
Total pulpwood		8,353.33		710,033.05	6,661.58	3,815.96	10,477.54
<u>Fuelwood</u>							
Hardwood		3,254.98		276,673.30	1,909.25	119.61	2,028.86
Total fuelwood		3,254.98		276,673.30	1,909.25	119.61	2,028.86
<u>Bolts</u>							
Birch, white		519.42		44,150.70	259.72	168.34	428.06
Total bolts		519.42		44,150.70	259.72	168.34	428.06
Total cordage		12,127.73		1,030,857.05	8,830.55	4,103.91	12,934.46
<u>Miscellaneous</u>							
<u>Posts</u>							
Cedar - lin. ft.	402		3,216	1,608.00	32.16	5.20	37.36
Balsam - " "	114		912	456.00	9.12		9.12
Christmas trees	35			17.50	8.75		8.75
Total miscellaneous	551		4,128	2,081.50	50.03	5.20	55.23
Total Ontario scale	291,939		23,410,858	4,375,861.30	104,251.29	121,795.87	226,047.16
Total cubic foot measure	1,613		25,921.03	25,921.03	1,522.50	35.56	1,558.06
Total cordage		12,127.73		1,030,857.05	8,830.55	4,103.91	12,934.46
Grand total	294,103	12,127.73		5,434,720.88	114,654.37	125,940.54	240,594.91

Number of permits issued and included in above -
Conversion factor - Ontario scale to cubic foot measure -
Conversion factor - cordage to cubic foot measure -

340
5.35
85.
37,093.39

Pembroke

Summary of Volume and Value of Timber Cut During Period April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Val
<u>Board Foot Measure</u>							
<u>Ontario Scale</u>							
Ash	593		47,649	8,906.35	238.28	84.50	322
Balsam	2,919		68,139	12,736.26	272.57	257.89	53
Basswood	2,871		227,365	42,498.13	1,136.85	865.85	2,002
Beech	1,940		142,013	26,544.49	213.02	293.23	506
Birch, white	11,289		588,618	110,022.06	882.96	762.31	1,645
Birch, yellow	97,954		8,542,486	1,596,726.36	42,712.48	72,175.27	114,887
Cedar	25		831	155.33	2.50	1.15	3
Cherry	877		62,675	11,714.95	313.39	62.68	376
Elm	958		128,102	23,944.30	640.53	128.09	768
Hemlock	102,520		7,529,023	1,407,294.02	22,587.07	10,615.24	33,202
Maple	110,867		9,183,616	1,716,563.74	45,918.11	10,557.30	56,475
Oak	3,144		143,784	26,875.51	718.96	359.60	1,078
Pine, jack	48,045		1,482,848	277,167.85	5,931.38	8,507.20	14,438
Pine, red	98,730		4,308,959	805,412.90	21,544.87	33,731.82	55,276
Pine, white	275,119		15,793,055	2,951,972.90	78,965.35	149,760.78	228,726
Poplar	106,310		4,637,757	866,870.47	6,956.64	7,415.81	14,372
Spruce	56,749		2,955,123	552,359.44	11,820.48	15,270.47	27,090
Tamarack	20		806	150.65	2.43	2.43	4
Total Ontario scale	920,930		55,842,849	10,437,915.71	240,857.87	310,851.62	551,709
<u>Cubic Foot Measure</u>							
<u>Boom Timber, Piling, Poles</u>							
<u>Boom and Dimension Timber</u>							
Hemlock	343		8,604.98	8,604.98	441.41	41.18	482
Pine, jack	110		2,506.53	2,506.53	122.44	221.79	344
Pine, red	679		17,135.16	17,135.16	875.87	1,590.52	2,466
Spruce	111		3,315.19	3,315.19	179.77	84.96	264
<u>Poles</u>							
Pine, jack	22,034		247,964.91	247,964.91	9,628.68	14,008.74	23,637
Pine, red	13,302		262,509.93	262,509.93	12,611.63	14,385.23	26,996
Spruce	279		7,227.20	7,227.20	370.70	222.15	592
Total boom timber, piling, poles	36,858		549,263.90	549,263.90	24,230.50	30,554.57	54,785
Total cubic foot measure	36,858		549,263.90	549,263.90	24,230.50	30,554.57	54,785
<u>Cordage</u>							
<u>Pulpwood</u>							
Balsam		704.40		59,874.00	986.15	286.16	1,272
Birch, white		11.00		935.00	5.50	5.50	11
Pine, jack		134.00		11,390.00	268.00		268
Pine, red		53.79		4,572.15	75.31		75
Pine, white		106.62		9,062.70	149.26		149
Poplar		4,178.85		355,202.25	2,089.45	965.65	3,055
Poplar (export levy)		(36.25)		(3,081.25)	3.63		3
Spruce		4,398.34		373,858.90	12,315.36	1,986.34	14,301
Tamarack		1.40		119.00	1.96		1
Total pulpwood		9,588.40		815,014.00	15,894.62	3,243.65	19,138
<u>Fuelwood</u>							
Hardwood		204.32		17,367.20	102.17		102
Softwood		41.63		3,538.55	20.82		20
Total fuelwood		245.95		20,905.75	122.99		122
Total cordage		9,834.35		835,919.75	16,017.61	3,243.65	19,261
<u>Miscellaneous</u>							
<u>Posts</u>							
Cedar - lin. ft.	739		6,388	3,194.00	63.88		63
<u>Car-Stakes</u>							
Birch, white - cu. ft.	100		204.00	204.00	1.20	.40	1
Pine, jack - " "	900		1,224.00	1,224.00	28.80	1.44	30
Pine, red - " "	1,410		1,917.60	1,917.60	31.58		31
Total miscellaneous	3,149		—	6,539.60	125.46	1.84	127
Total Ontario scale	920,930		55,842,849	10,437,915.71	240,857.87	310,851.62	551,709
Total cubic foot measure	36,858		549,263.90	549,263.90	24,230.50	30,554.57	54,785
Total cordage		9,834.35		835,919.75	16,017.61	3,243.65	19,261
Grand total	960,937	9,834.35	—	11,829,638.96	281,231.44	344,651.68	625,883

Number of permits issued and included in above -	89	37,009
Conversion factor - Ontario scale to cubic foot measure -	5.35	
Conversion factor - cordage to cubic foot measure -	85.	

Port Arthur

Summary of Volume and Value of Timber Cut During Period April 1, 1959, and March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
<u>Ord Foot Measure</u>					\$	\$	\$
<u>Ontario Scale</u>							
Ash	12		944	176.45	5.00	.66	5.66
Balsam	431		9,950	1,859.81	39.80	1.00	40.80
Cedar	45		1,206	225.42	3.62	2.41	6.03
Pine, jack	3,976		108,016	20,189.91	432.07	324.64	756.71
Pine, red	14		1,803	337.01	9.02	63.77	72.79
Pine, white	8,466		724,724	135,462.43	3,623.66	16,408.11	20,031.77
Poplar	16,204		443,476	82,892.71	665.21	186.26	851.47
Spruce	967		47,957	8,963.93	191.82	157.74	349.56
Total Ontario scale	30,115		1,338,076	250,107.67	4,970.20	17,144.59	22,114.79
<u>Cubic Foot Measure</u>							
<u>Sawlogs</u>							
Balsam	155,490		607,630.95	607,630.95	10,010.34	5,537.70	15,548.04
Birch, white	3,479		25,340.38	25,340.38	149.64	64.27	213.91
Pine, jack	481,983		2,215,335.72	2,215,335.72	52,118.67	5,771.94	57,890.61
Pine, red	298		3,798.16	3,798.16	125.34	75.44	200.78
Pine, white	905		15,567.42	15,567.42	513.72	420.33	934.05
Poplar	120,287		804,489.14	804,489.14	4,740.52	909.34	5,649.86
Spruce	649,807		2,261,495.12	2,261,495.12	97,564.77	23,932.17	121,496.94
Total sawlogs (cubic)	1,412,249		6,633,656.89	6,633,656.89	165,223.00	36,711.19	201,934.19
<u>Boom Timber, Piling, Poles</u>							
<u>Boom and Dimension Timber</u>							
Pine, white	10		625.20	625.20	37.51	12.50	50.01
Spruce	972		29,391.38	29,391.38	1,536.44	131.81	1,668.25
<u>Piling</u>							
Spruce	2,607		69,549.32	69,549.32	3,673.60	274.25	3,947.85
<u>Poles</u>							
Pine, jack	23,513		463,734.64	463,734.64	21,987.82	276.35	22,264.17
Total boom timber, piling, poles	27,102		563,300.54	563,300.54	27,235.37	694.91	27,930.28
Total cubic measure	1,439,351		7,196,957.43	7,196,957.43	192,458.37	37,406.10	229,864.47
<u>Cordage</u>							
<u>Pulpwood</u>							
Balsam		23,118.24		1,965,050.40	32,365.54	10,953.66	43,319.20
Balsam (export levy)		(268.41)		(22,814.85)		268.41	268.41
Birch, white		296.39		25,193.15	148.20	156.59	304.79
Cedar		7.00		595.00	9.80	4.20	14.00
Pine, jack		47,721.87		4,056,358.95	95,442.83	9,345.63	104,788.46
Pine, jack (export levy)		(6,910.36)		(587,380.60)		3,455.50	3,455.50
Poplar		6,029.13		512,476.05	3,014.58	4,147.26	7,161.84
Poplar (export levy)		(469.27)		(39,887.95)		46.93	46.93
Spruce		189,536.25		16,110,581.25	530,704.15	79,087.48	609,791.63
Spruce (export levy)		(14,943.93)		(1,270,234.05)		14,943.93	14,943.93
Tamarack		90.58		7,699.30	126.81	36.87	163.68
Tamarack (export levy)		(1.92)		(163.20)		1.92	1.92
Total pulpwood		266,799.46		22,677,954.10	661,811.91	122,448.38	784,260.29
<u>Fuelwood</u>							
Hardwood		451.66		38,391.10	225.83	218.33	444.16
Total fuelwood		451.66		38,391.10	225.83	218.33	444.16
<u>Bolts</u>							
Birch, white		7.47		634.95	3.74		3.74
Poplar		2,392.44		203,357.40	1,196.23		1,196.23
Total bolts		2,399.91		203,992.35	1,199.97		1,199.97
Total cordage		269,651.03		22,920,337.55	663,237.71	122,666.71	785,904.42
<u>Miscellaneous</u>							
Christmas trees	50			25.00	4.00		4.00
Total miscellaneous	50			25.00	4.00		4.00
Total Ontario scale	30,115		1,338,076	250,107.67	4,970.20	17,144.59	22,114.79
Total cubic foot measure	1,439,351		7,196,957.43	7,196,957.43	192,458.37	37,406.10	229,864.47
Total cordage		269,651.03		22,920,337.55	663,237.71	122,666.71	785,904.42
Grand total	1,469,516	269,651.03	—	30,367,427.65	860,670.28	177,217.40	1,037,887.68

Number of permits issued and included in above -

321

61,603.66

Conversion factor - Ontario scale to cubic foot measure -

5.35

Conversion factor - cordage to cubic foot measure -

85.

Sault Ste. Marie

Summary of Volume and Value of Timber Cut During Period from April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
<u>Board Foot Measure</u>							
<u>Ontario Scale</u>							
Ash	191		14,176	2,649.72	70.88	41.54	112.8
Balsam	132		4,328	808.97	17.30	41.58	58.1
Basswood	04		20	3.74	.10	.06	.1
Birch, white	5,107		292,301	54,635.70	438.46	2,356.21	2,794.6
Birch, yellow	181,979		16,273,776	3,041,827.29	81,368.92	173,445.91	254,814.8
Cedar	357		10,766	2,012.34	32.31	37.51	69.8
Elm	1,600		165,002	30,841.49	825.02	438.75	1,263.7
Hemlock	10,889		1,069,728	199,949.16	3,209.19	2,111.60	5,320.7
Maple	38,456		3,159,038	590,474.39	15,795.23	11,146.61	26,941.8
Oak	1,503		187,420	35,031.78	937.12	630.88	1,568.0
Pine, jack	2,315		105,976	19,808.60	423.90	343.05	766.9
Pine, red	75,501		7,046,541	1,317,110.47	35,232.72	23,690.58	58,923.3
Pine, white	309,056		33,299,097	6,224,130.28	166,495.52	120,913.43	287,408.9
Poplar	432		26,497	4,952.71	39.75	92.74	132.4
Spruce	19,881		1,249,833	233,613.64	4,999.32	4,970.29	9,969.6
Total Ontario scale	647,403		62,904,499	11,757,850.28	309,885.74	340,260.74	650,146.4
<u>Cubic Foot Measure</u>							
<u>Sawlogs</u>							
Cedar	78		497.55	497.55	14.93	9.95	24.8
Pine, red	67		221.03	221.03	7.29	19.23	26.5
Spruce	73		611.48	611.48	20.18	34.85	55.0
Total sawlogs	218		1,330.06	1,330.06	42.40	64.03	106.4
<u>Boom Timber, Piling, Poles</u>							
<u>Boom and Dimension Timber</u>							
Balsam	34		244.84	244.84	4.91	14.92	19.8
Cedar	30		554.01	554.01	25.19		25.1
Pine, jack	332		2,646.61	2,646.61	95.02		95.0
Pine, red	128		3,243.68	3,243.68	166.49		166.4
Pine, white	231		14,292.11	14,292.11	847.98	20.36	868.3
Spruce	267		6,256.85	6,256.85	285.39	109.49	394.8
Poles							
Cedar	261		4,503.01	4,503.01	135.63	87.73	223.3
Total boom timber, piling, poles	1,283		31,741.11	31,741.11	1,560.61	232.50	1,793.1
Total cubic foot measure	1,501		33,071.17	33,071.17	1,603.01	296.53	1,899.5
<u>Cordage</u>							
<u>Pulpwood</u> <i>Balsam</i>							
Birch, white		3,718.92		316,108.20	5,206.48	754.47	5,960.9
Pine, jack		760.55		64,646.75	380.29	463.46	843.7
Pine, red		1,260.64		107,154.40	2,521.28	1,711.06	4,232.3
Pine, white		157.52		13,389.20	220.53	23.00	243.5
Poplar		.21		17.85	.29	.07	.3
Spruce		1,000.12		85,010.20	500.07	389.29	889.3
Tamarack		6,051.30		514,360.50	16,943.64	3,063.11	20,006.7
Total pulpwood		12,949.67		1,100,721.95	25,773.15	6,404.77	32,177.9
<u>Fuelwood</u>							
Hardwood		550.00		46,750.00	275.00	275.00	550.0
Total fuelwood		550.00		46,750.00	275.00	275.00	550.0
<u>Bolts</u>							
Cedar		.16		13.60	.22	.02	.2
Total bolts		.16		13.60	.22	.02	.2
Total cordage		13,499.83		1,147,485.55	26,048.37	6,679.79	32,728.1
<u>Miscellaneous</u>							
<u>Posts</u>							
Cedar - 1in. ft.	974		7,755	3,877.50	77.55		77.5
<u>Mining Timber</u>							
Spruce	700		1,275.00	1,275.00	42.00	18.00	60.0
Total miscellaneous	1,674		—	5,152.50	119.55	18.00	137.5
Total Ontario scale	647,403		62,904,499	11,757,850.28	309,885.74	340,260.74	650,146.4
Total cubic foot measure	1,501		33,071.17	33,071.17	1,603.01	296.53	1,899.5
Total cordage		13,499.83		1,147,485.55	26,048.37	6,679.79	32,728.1
Grand total	650,578		—	12,943,559.50	337,656.67	347,255.06	684,911.7

Number of permits issued and included in above -

Conversion factor - Ontario scale to cubic foot measure -

Conversion factor - cordage to cubic foot measure -

127 46,640.34

5.35

85.

Sioux Lookout

Summary of Volume and Value of Timber Cut During Period from April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
Ord Foot Measure					\$	\$	\$
Ontario Scale							
Balsam	3,435		67,838	12,680.00	271.35		271.35
Pine, jack	174,361		4,525,489	845,885.80	18,101.94	6,770.19	24,872.13
Pine, red	133		10,114	1,890.47	50.57	10.11	60.68
Spruce	336,049		7,151,808	1,336,786.54	28,607.23	10,221.55	38,828.78
Total Ontario scale	513,978		11,755,249	2,197,242.81	47,031.09	17,001.85	64,032.94
Doyle Rule							
Pine, red	2,091		96,812	24,203.00	484.06	484.06	968.12
Pine, white	2,762		132,074	33,018.50	660.37	660.37	1,320.74
Total Doyle rule	4,853		228,886	57,221.50	1,144.43	1,144.43	2,288.86
Ord Foot Measure							
Sawlogs							
Pine, jack	59,801		336,627.51	336,627.51	7,913.76	1,655.12	9,568.88
Pine, red	5,925		91,092.40	91,092.40	2,869.88	2,476.61	5,346.49
Poplar	5,718		42,397.06	42,397.06	254.38	50.88	305.26
Spruce	61,754		476,318.60	476,318.60	15,714.87	912.34	16,627.21
Total sawlogs	133,198		946,435.57	946,435.57	26,752.89	5,094.95	31,847.84
Boom Timber, Piling, Poles							
Boom and Dimension Timber							
Pine, jack	444		3,739.82	3,739.82	119.29		119.29
Pine, white	02		213.41	213.41	12.80		12.80
Spruce	1,753		44,742.28	44,742.28	2,411.41	80.50	2,491.91
Poles							
Cedar	27		258.66	258.66	8.79		8.79
Pine, jack	48,277		684,625.20	684,625.20	27,950.60		27,950.60
Pine, red	62		3,577.97	3,577.97	209.18	8.31	217.49
Total boom timber, piling, poles	50,565		737,157.34	737,157.34	30,712.07	88.81	30,800.88
Total cubic foot measure	183,763		1,683,592.91	1,683,592.91	57,464.96	5,183.76	62,648.72
Cordage							
Pulpwood							
Balsam		1,979.88		168,289.80	2,704.13	718.78	3,422.91
Balsam - export levy		(5.81)		(493.85)		5.81	5.81
Pine, jack		31,750.13		2,698,761.05	63,500.26	3,069.80	66,570.06
Spruce		129,213.17		10,983,119.45	361,796.88	12,911.47	374,708.35
Spruce - export levy		(8,397.31)		(713,771.35)		8,397.31	8,397.31
Total pulpwood		162,943.18		13,850,170.30	428,001.27	25,103.17	453,104.44
Fuelwood							
Softwood		5,533.75		470,368.75	2,766.88	129.37	2,896.25
Total fuelwood		5,533.75		470,368.75	2,766.88	129.37	2,896.25
Total cordage		168,476.93		14,320,539.05	430,768.15	25,232.54	456,000.69
Miscellaneous							
Posts							
Cedar - lin. ft.	981		7,848	3,924.00	79.48		79.48
Mining Timber							
Spruce - cu. ft.	35,193		49,200.20	49,200.20	1,877.22		1,877.22
Total miscellaneous	36,174		—	53,124.20	1,956.70		1,956.70
Total Ontario scale	513,978		11,755,249	2,197,242.81	47,031.09	17,001.85	64,032.94
Total Doyle rule	4,853		228,886	57,221.50	1,144.43	1,144.43	2,288.86
Total cubic foot measure	183,763		1,683,592.91	1,683,592.91	57,464.96	5,183.76	62,648.72
Total cordage		168,476.93		14,320,539.05	430,768.15	25,232.54	456,000.69
Grand total	738,768	168,476.93	—	18,311,720.47	538,265.33	48,562.58	586,927.91

Number of permits issued and included in above -

Conversion factor - Ontario scale to cubic foot measure -

Conversion factor - cordage to cubic foot measure -

229

5.35

85

75,987.24

Sudbury

Summary of Volume and Value of Timber Cut During Period April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
Board Foot Measure							
<u>Ontario Scale</u>							
Ash	16		1,069	199.81	5.35	4.90	10.2
Birch, white	4,957		288,614	53,946.54	432.92	1,613.63	2,046.7
Birch, yellow	5,989		414,210	77,422.43	2,071.05	6,586.77	8,657.8
Cedar	259		7,578	1,416.45	22.73	8.80	31.5
Elm	43		4,216	788.04	21.08	8.43	29.5
Hemlock	7,645		360,202	67,327.48	1,080.60	1,317.52	2,398.1
Maple	1,010		83,088	15,530.47	415.44	581.33	996.7
Oak	25		2,505	468.22	12.52	7.30	19.8
Pine, jack	11,981		203,552	38,047.10	814.20	157.90	972.1
Pine, red	41,885		2,582,907	482,786.35	12,914.55	8,468.33	21,382.8
Pine, white	20,524		1,567,921	293,069.35	7,839.62	7,818.84	15,658.4
Poplar	23		996	186.17	1.49	.50	1.9
Spruce	2,580		107,918	20,171.59	431.68	517.99	949.6
Total Ontario scale	96,937		5,624,776	1,051,360.00	26,063.23	27,092.24	53,155.4
Cubic Foot Measure							
<u>Sawlogs</u>							
Balsam	253		713.36	713.36	11.77	14.23	26.0
Birch, white	37		253.00	253.00	1.52	.34	1.8
Pine, jack	25,450		172,321.48	172,321.48	4,049.56	67.90	4,117.4
Pine, red	48,605		464,556.20	464,556.20	15,330.36	7,498.86	22,829.2
Pine, white	21,636		207,043.08	207,043.08	6,832.42	4,664.64	11,497.0
Poplar	889		5,554.22	5,554.22	33.33	42.55	75.8
Spruce	20,155		113,736.44	113,736.44	3,753.31	817.07	4,570.3
Tamarack	64		400.53	400.53	6.61	9.41	16.0
Total sawlogs	117,089		964,578.31	964,578.31	30,018.88	13,115.00	43,133.8
<u>Boom Timber, Piling, Poles</u>							
Pine, jack	92		788.00	788.00	40.64		40.6
Pine, red	10		128.23	128.23	5.13	2.56	7.6
Spruce	164		1,747.24	1,747.24	67.47	40.87	108.3
Poles							
Cedar	143		2,239.66	2,239.66	69.12	297.50	366.6
Pine, jack	447		5,490.47	5,490.47	402.80	30.77	433.5
Pine, red	1,493		35,173.11	35,173.11	1,771.93	1,154.37	2,926.3
Pine, white	09		241.07	241.07	12.51	5.36	17.8
Spruce	65		2,198.16	2,198.16	122.73	30.73	153.4
Total boom timber, piling, poles	2,423		48,005.94	48,005.94	2,492.33	1,562.16	4,054.4
Total cubic foot measure	119,512		1,012,584.25	1,012,584.25	32,511.21	14,677.16	47,188.3
Cordage							
<u>Pulpwood</u>							
Ash		26.85		2,282.25	13.43	13.42	26.8
Balsam		520.21		44,217.85	728.30	551.30	1,279.6
Birch, white		619.94		52,694.90	309.98	499.82	809.8
Maple		5.00		425.00	2.50	26.50	29.0
Pine, jack		14,068.81		1,195,848.85	28,137.62	261.90	28,399.5
Pine, red		581.14		49,396.90	813.60	2.82	816.4
Pine, white		243.79		20,722.15	341.31	25.88	367.1
Poplar		2,876.71		244,520.35	1,438.36	1,435.27	2,873.6
Spruce		3,991.31		339,261.35	11,175.67	446.79	11,622.4
Total pulpwood		22,933.76		1,949,369.60	42,960.77	3,263.70	46,224.4
Fuelwood				188,355.75	1,107.97	99.52	1,207.4
Hardwood		2,215.95		7,650.00	45.00	7.00	52.0
Softwood		90.00		196,005.75	1,152.97	106.52	1,259.4
Total fuelwood		2,305.95		2,145,375.35	44,113.74	3,370.22	47,483.9
Total cordage		25,239.71					
Miscellaneous							
<u>Posts</u>							
Cedar - 1in. ft.	753		5,440	2,720.00	54.40	116.60	171.0
Pine, jack - 1in. ft.	205		1,330	665.00	13.30	32.90	46.2
<u>Mining Timber</u>							
Poplar - cu. ft.	9,222		36,888.00	36,888.00	184.44		184.4
Total miscellaneous	10,180			40,273.00	252.14	149.50	401.6
Total Ontario scale	96,937		5,624,776	1,051,360.00	26,063.23	27,092.24	53,155.4
Total cubic foot measure	119,512		1,012,584.25	1,012,584.25	32,511.21	14,677.16	47,188.3
Total cordage		25,239.71		2,145,375.35	44,113.74	3,370.22	47,483.9
Grand total	226,629	25,239.71		4,249,592.60	102,940.32	45,289.12	148,229.4

Number of permits issued and included in above -

Conversion factor - Ontario scale to cubic foot measure -

Conversion factor - cordage to cubic foot measure

359

5.35

85

16,082.57

Swastika

Summary of Volume and Value of Timber Cut During Period April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
<u>Board Foot Measure</u>							
<u>Ontario Scale</u>							
Pine, Jack	796,854		21,095,386	3,943,062.80	84,381.55	55,936.18	140,317.73
Pine, white	5,384		534,071	99,826.36	2,670.36	4,005.53	6,675.89
Poplar	32,176		1,112,833	208,006.17	1,669.24	872.84	2,542.08
Spruce	232,720		5,118,300	956,691.59	20,473.19	12,862.20	33,335.39
Tamarack	75		2,345	438.32	7.03	16.41	23.44
Total Ontario scale	1,067,209		27,862,935	5,208,025.24	109,201.37	73,693.16	182,894.53
<u>Cubic Foot Measure</u>							
Sawlogs							
Balsam	80		223.06	223.06	3.68	9.70	13.38
Birch, white	1,406		4,433.79	4,433.79	26.60	60.63	87.23
Pine, Jack	276,241		1,374,262.81	1,374,262.81	32,295.17	38,741.38	71,036.55
Poplar	85,603		634,555.61	634,555.61	3,807.34	9,341.12	13,148.46
Spruce	141,820		637,251.32	637,251.32	21,029.29	11,541.13	32,570.42
Total sawlogs	505,150		2,650,726.59	2,650,726.59	57,162.08	59,693.96	116,856.04
<u>Boom Timber, Piling, Poles</u>							
Poles							
Pine, Jack	4,785		86,377.67	86,377.67	3,844.66	3,439.93	7,284.59
Spruce	170		3,630.05	3,630.05	176.71	108.90	285.61
Total boom timber, piling, poles	4,955		90,007.72	90,007.72	4,021.37	3,548.83	7,570.20
Total cubic foot measure	510,105		2,740,734.31	2,740,734.31	61,183.45	63,242.79	124,426.24
<u>Cordage</u>							
Pulpwood							
Balsam		3,763.89		319,930.65	5,269.44	1,544.07	6,813.51
Pine, Jack		2,111.93		179,514.05	4,223.86	53.99	4,277.85
Poplar		2,075.76		176,439.60	1,037.88	15.46	1,053.34
Poplar, export levy		(200.00)		(17,000.00)		20.00	20.00
Spruce		29,596.40		2,515,694.00	82,869.92	16,803.04	99,672.96
Tamarack		48.28		4,103.80	67.59	28.97	96.56
Total pulpwood		37,596.26		3,195,682.10	93,468.69	18,465.53	111,934.22
Fuelwood							
Hardwood		2,021.04		171,788.40	1,010.52	34.28	1,044.80
Softwood		985.56		83,772.60	492.78		492.78
Total Fuelwood		3,006.60		255,561.00	1,503.30	34.28	1,537.58
Bolts							
Birch, white		274.98		23,373.30	137.49	137.49	274.98
Poplar		6,338.55		538,776.75	3,169.29	3,169.29	6,338.58
Total bolts		6,613.53		562,150.05	3,306.78	3,306.78	6,613.56
Total cordage		47,216.39		4,013,393.15	98,278.77	21,806.59	120,085.36
<u>Miscellaneous</u>							
Posts							
Cedar - lin. ft.	242		1,936	968.00	19.36	19.36	38.72
Mining Timber							
Spruce - cu. ft.	46,470		83,748.99	83,748.99	2,758.78	298.36	3,057.14
Total miscellaneous	46,712			84,716.99	2,778.14	317.72	3,095.86
Total Ontario scale	1,067,209		27,862,935	5,208,025.24	109,201.37	73,693.16	182,894.53
Total cubic foot measure	510,105		2,740,734.31	2,740,734.31	61,183.45	63,242.79	124,426.24
Total cordage		47,216.39		4,013,393.15	98,278.77	21,806.59	120,085.36
Grand total	1,624,026	47,216.39	—	12,046,869.69	271,441.73	159,060.26	430,501.99

Number of permits issued and included in above -

Conversion factor - Ontario scale to cubic foot measure -

Conversion factor - cordage to cubic foot measure -

428 55,563.03

5.35

85

Tweed

Summary of Volume and Value of Timber Cut During Period April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
Board Foot Measure							
Ontario Scale							
Ash	1,360		53,242	9,951.78	266.97	240.19	507.16
Balsam	20,266		403,512	75,422.80	1,671.07	2,524.23	4,195.30
Basswood	17,385		869,381	162,501.12	4,363.47	5,985.83	10,349.30
Beech	9,188		442,766	82,760.00	664.60	1,452.93	2,117.53
Birch, white	15,171		466,060	87,114.02	1,079.77	1,559.47	2,639.24
Birch, yellow	3,951		254,396	47,550.65	1,272.81	2,207.64	3,480.45
Butternut	108		5,909	1,104.49	9.36	35.25	44.61
Cedar	7,458		150,756	28,178.69	459.87	963.29	1,423.16
Cherry	13		479	89.53	2.40	2.24	4.64
Elm	2,466		178,838	33,427.66	895.29	499.78	1,395.07
Hemlock	46,391		2,574,330	481,183.18	7,730.96	4,407.86	12,138.82
Maple	40,886		2,926,004	546,916.64	14,643.18	11,314.60	25,957.70
Oak	7,385		320,197	59,849.91	1,683.44	1,234.24	2,917.68
Pine, red	16,296		685,164	128,068.04	3,755.87	4,007.17	7,763.04
Pine, white	89,847		4,658,523	870,751.96	25,445.33	40,290.97	65,736.30
Poplar	83,944		3,131,063	585,245.42	4,927.38	6,519.36	11,446.74
Spruce	27,519		1,070,808	200,151.03	4,395.07	8,580.73	12,975.80
Tamarack	1,337		33,573	6,275.33	100.72	128.28	229.00
Total Ontario scale	390,971		18,225,001	3,406,542.25	73,367.56	91,954.06	165,321.61
Cubic Foot Measure							
Boom Timber, Piling, Poles							
Booms and Dimension Timber							
Balsam	03		5.92	5.92	.18	.12	.30
Cedar	03		9.64	9.64	.29	.19	.48
Elm	02		9.24	9.24	.28	.18	.46
Maple	02		10.41	10.41	.31	.21	.52
Spruce	1,064		2,228.01	2,228.01	68.76	23.31	92.07
Tamarack	570		1,080.63	1,080.63	32.42		32.42
Piling							
Ash	03		72.04	72.04	3.60		3.60
Balsam	03		52.05	52.05	2.08		2.08
Basswood	04		80.94	80.94	3.88		3.88
Beech	25		595.66	595.66	29.70		29.70
Birch, white	03		67.94	67.94	3.40		3.40
Cedar	182		548.78	548.78	17.07		17.07
Elm	237		1,964.78	1,964.78	61.09	7.28	68.37
Hemlock	1,221		24,825.76	24,825.76	1,135.70	35.75	1,171.45
Maple	03		62.64	62.64	2.74		2.74
Oak	03		62.57	62.57	2.93		2.93
Pine, red	3,371		68,350.79	68,350.79	3,128.34	683.51	3,811.85
Pine, white	3,266		68,840.73	68,840.73	3,211.19	688.43	3,899.62
Poplar	431		9,463.71	9,463.71	450.97		450.97
Spruce	2,165		39,727.22	39,727.22	1,872.26	425.89	2,298.15
Tamarack	248		622.82	622.82	18.68	3.12	21.80
Poles							
Hemlock	202		4,459.36	4,459.36	215.28		215.28
Pine, red	506		10,325.06	10,325.06	469.70	103.25	572.95
Pine, white	713		9,688.06	9,688.06	398.47	5.38	403.85
Poplar	01		21.65	21.65	1.08		1.08
Spruce	04		29.20	29.20	.88	.29	1.17
Total booms, piling, poles	14,235		243,205.61	243,205.61	11,131.28	1,976.91	13,108.19
Total cubic measure	14,235		243,205.61	243,205.61	11,131.28	1,976.91	13,108.19
Cordage							
Pulpwood							
Ash		410.77		34,915.45	205.38	105.05	310.43
Balsam		820.14		69,711.90	1,148.19	491.62	1,639.81
Basswood		23.50		1,997.50	11.75	11.75	23.50
Beech		1,273.94		108,284.90	636.97	280.37	917.34
Birch, white		2,640.64		224,454.40	1,320.33	1,199.98	2,520.31
Elm		540.36		45,930.60	270.18	137.66	407.84
Maple		2,265.04		192,528.40	1,132.54	981.08	2,113.62
Oak		250.28		21,273.80	125.14	62.57	187.71
Pine, white		17.95		1,525.75	25.13	19.75	44.88
Poplar		11,616.86		987,433.10	5,808.49	4,202.22	10,010.71
Spruce		194.79		16,557.15	545.41	38.96	584.37
Total pulpwood		20,542.27		1,704,612.95	11,229.51	7,531.01	18,760.52
Fuelwood							
Hardwood		137.52		11,689.20	68.76		68.76
Softwood		32.00		2,720.00	16.00		16.00
Total fuelwood		169.52		14,409.20	84.76		84.76
Total cordage		20,223.79		1,719,022.15	11,314.27	7,531.01	18,845.28
Miscellaneous							
Posts							
Cedar - 1in. ft.	443		3,549	1,774.50	35.49	21.12	56.61
Christmas trees	343			171.50	51.45		51.45
Total miscellaneous	786		3,549	1,946.00	86.94	21.12	108.06
Total Ontario scale	390,971		18,225,001	3,406,542.25	73,367.56	91,954.06	165,321.62
Total cubic foot measure	14,235		243,205.61	243,205.61	11,131.28	1,976.91	13,108.19
Total cordage		20,223.79		1,719,022.15	11,314.27	7,531.01	18,845.28
Grand total	405,992		20,223.79	5,370,716.01	95,900.05	101,485.10	197,383.15

Number of permits issued and included in above -

198

60,746.87

Conversion factor - Ontario scale to cubic foot measure -

5.35

Conversion factor - cordage to cubic foot measure -

85

White River

Summary of Volume and Value of Timber Cut During Period April 1, 1959, to March 31, 1960

Species	Pieces	Cords	Feet	Equivalent in Cu. Ft.	Dues	Bonus	Value
<u>Board Foot Measure</u>							
Ontario Scale							
Pine, jack	7,071		162,971	30,461.87	651.88	325.94	977.82
Pine, white	67		4,000	747.66	20.00	24.00	44.00
Total Ontario scale	7,138		166,971	31,209.53	671.88	349.94	1,021.82
<u>Cubic Foot Measure</u>							
Sawlogs							
Birch, white	598		3,304.33	3,304.33	19.83		19.83
Pine, jack	361,100		1,372,275.66	1,372,275.66	32,248.48	22,642.55	54,891.03
Spruce	42,524		156,566.36	156,566.36	5,166.69	2,661.63	7,828.32
Total sawlogs	404,222		1,532,146.35	1,532,146.35	37,435.00	25,304.18	62,739.18
Boom Timber, Piling, Poles							
Booms							
Spruce	56		2,341.24	2,341.24	77.11	2.75	79.86
Poles							
Pine, jack	678		14,793.76	14,793.76	771.67	147.19	918.86
Total boom timber, piling, poles	734		17,135.00	17,135.00	848.78	149.94	998.72
Total cubic foot measure	404,956		1,549,281.35	1,549,281.35	38,283.78	25,454.12	63,737.90
<u>Cordage</u>							
Pulpwood							
Balsam		6,640.11		564,409.35	9,296.16	1,245.85	10,542.01
Pine, jack		30,352.57		2,579,968.45	60,705.14	3,035.26	63,740.40
Spruce		87,906.44		7,472,047.40	246,138.02	21,299.00	267,437.02
Total pulpwood		124,899.12		10,616,425.20	316,139.32	25,580.11	341,719.43
Fuelwood							
Hardwood		171.50		14,577.50	85.75	85.75	171.50
Softwood		140.00		11,900.00	70.00	72.50	142.50
Total fuelwood		311.50		26,477.50	155.75	158.25	314.00
Total cordage		125,210.62		10,642,902.70	316,295.07	25,738.36	342,033.43
<u>Miscellaneous</u>							
Posts							
Pine, jack - 11n. ft.	452		1,500	750.00	15.00	15.00	30.00
Mining Timber							
Pine, jack - cu. ft.	586		3,932.28	3,932.28	139.91	79.37	219.28
Spruce	8,150		14,761.33	14,761.33	738.07	153.80	891.87
Ties							
Pine, jack	1,183		8,299.22	8,299.22	195.03	53.94	248.97
Total miscellaneous	10,371		-	27,742.83	1,088.01	302.11	1,390.12
Total Ontario scale	7,138		166,971	31,209.53	671.88	349.94	1,021.82
Total cubic measure	404,956		1,549,281.35	1,549,281.35	38,283.78	25,454.12	63,737.90
Total cordage		125,210.62		10,642,902.70	316,295.07	25,738.36	342,033.43
Grand total	422,465	125,210.62	-	12,251,136.41	356,338.74	51,844.53	408,183.27

Number of permits issued and included above - 67
 Conversion factor - Ontario scale to cubic foot measure - 5.35
 Conversion factor - cordage to cubic foot measure - 85.

3,439.43

